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The "Case" or the Patient?

UNDER the heading of "A Beautiful Case," *The Inter Ocean* recently printed an editorial which for aptness could not well be surpassed. The story is that a young man suffering with a fever presented "such a beautiful case" that physicians came and stood at his bedside by the hour, studying the symptoms as presented by the victim with classic regularity, in such classical regularity, in fact, as they rarely are seen except in the textbook. Years afterward this same individual was enabled to escape a threatened quarantine by the fact that the medical inspector remembered that "beautiful case." That young man probably did not realize how lucky he was that his beautiful case had not been rounded out by a necropsy!

Let us remember that scientific interest is one thing, but that humane interest is more. Studying disease in the abstract is well; studying a sick human being is better. Scientific observation and accurate recording of a special case are of great value, but curing the patient is still more valuable.

It is a misfortune, which collectively costs our profession millions of dollars each year, that a large part of the public has, unfortunately, imbibed the conviction that we doctors are more interested in the scientific aspect of a case than in the patient's personality. But to the patient personal interest is everything, and what he wants is that that should be everything to his medical adviser.

This fact, after all, is the most powerful motive in the gravitation of the great public away from the regular profession and toward every class of pretenders, especially those who, springing from their own midst, are more closely united to them than to the scientifically educated physician. The latter is apt to be placed upon a pedestal, too lofty, too pure, too fine, for everyday use and for familiar association. "Doc" is always nearer to the hearts of the public than The Doctor. That dignity which demands the uncovered head, in recognition of the lofty professional standing of a man, costs that dignified individual a good many dollars; and, incidentally, it costs the public a good many lives that could have been saved had they been left to his skilled care. The law of compensation rules everywhere.

In this case we may well ask ourselves, Is it worth while? After all, the dignity which requires to be guarded and to be hedged in is not worth very much. There is indeed a true dignity, that which comes from a profound understanding of one's profession, which is worth far more than any

assumption of manner or jealous claim of superiority.

There may be a morbid satisfaction in having the man of the house remove his hat, and to see the housewife whip off her apron, hurriedly dust the best chair in the parlor for you, and then to sit up straight while she is listening to the oracular utterances from your lips; but I would rather have the children climb on my knee, listen to their prattle and have them clamor for a story. Yes, and if a patient dies, I like the family to feel that the doctor is nearly as heart-broken over the loss as he would be if it were one of his own kin. For the life of me, I cannot see why a man can not feel this way and yet have all of the scientific interest in the case, as such, which also is good for him.

There is but one way to earn anything—that is, to find out the laws which govern production, and to shape our actions in accordance with these laws. Good luck never comes to the capable man as a surprise. He is prepared for it, because it was the very thing he has a right to expect. Sooner or later, and after many hard raps, every man who lives long enough will find this out. When he does so he has the key to success, though it may be too late to use it.—David Starr Jordan.

FASHION IN SURGERY

The surgeon is very apt to assume for his medical brother a constantly changing predilection for whatever remedial agents may happen to be in vogue at the time. The general impression attributes to those who apply mechanical remedies, for the relief of mechanical disorders, more of stability, of certainty, in their application. But is this in accord with the truth?

The Lancet for October 1, 1910, contains an editorial, entitled "Fashion in Surgery," which affords some interesting reading. The writer mentions Sir James Simpson's introduction of acupuncture as a means of arresting hemorrhage. It was thought at the time that this method would utterly replace all other means of stopping bleeding. Where is acupunture now? Absolutely forgotten. Most medical men would now be unable to describe it.

Less than fifteen years ago Kaler published his method for the forcible reduction of angular curvature of the spine. Its wonders were proclaimed far and wide. The ease and safety of the reduction were dilated upon, the completeness of the restoration to the normal state was demonstrated by numerous illustrations of patients before and after the marvelous operation. Where is Kaler's method now? In the entire country, or even in the whole world, has this operation been performed on one single child within five years? Dangers undreamed of soon made their appearance, a few sudden deaths occurred, and the promise of improvement in walking never materialized.

Even more recently gastroenterostomy has been put forward as a panacea for all gastric ills; for pyloric stenosis, for gastric and duodenal ulcers, hematemesis, dilation of the stomach, malignant as well as simple gastric affections, in fact for so many conditions that one wondered why nature had erred in not providing man with a "normal gastroenterostomosis." Time has shown that this operation does not possess all the virtues attributed to it, and at present most surgeons agree that it is seldom of permanent value unless there is definite obstruction at the pylorus. Generally, when no such obstruction exists, the new orifice soon closes. True, many persons were none the worse for the operation, but it is more than doubtful whether many were benefited.

The marvelous results of Lister's method commended it to the surgical profession. When similar results were obtained by methods alike in principle, but different in practice, a tendency arose to lay stress on certain points and to regard Lister out of date.

Aseptic methods naturally developed from antiseptic surgery, and they are not opposed to it. Some months ago some American surgeons visiting London found Sir Watson Cheyne still using strong carbolic-acid solutions on wounds. Some were inclined to consider his method not the best modern surgical practice, nevertheless his results will compare favorably with the most rigorous aseptic practice. In this connection, compare Dr. Gray's article on another page of this issue.

Lister's advocacy of catgut met with much opposition, but time has changed this, many surgeons now maintaining that catgut is the only thing for a buried suture

It is perhaps fortunate that the surgeons have not adopted Senn's recommendation of narwhal ligament for this purpose, as the supply would probably soon fall short of the demand, and this interesting beast would become extinct.

At present rubber gloves are employed by the majority of surgeons, yet in some hospitals there is a tendency to discard them as needless if not actually harmful. Many additions could be made to this list. There was a time when all the surgeons in the world were doing tenotomies. It has been long since any surgical journal contained references to Marion Sims's operations for vesicovaginal fistula or splitting the uterine cervix in any but a historical sense.

As a matter of fact, it would not be far from the truth to state that the history of surgery is an account of a succession of surgical fads that came into widespread vogue and then were thrown aside. This, however, would not do justice to the enormous progress that has been made by the surgical fraternity. It would be taking account of the froth on the surface of the torrent, instead of the deep-running water beneath.

The business man who makes a fault hurts himself, the physician who makes a fault hurts someone else.

—Hobart A. Hare.

WHERE THE CENSORSHIP FAILS

No more striking illustration of the absurdity of trying to censorize the therapeutic thought of the century, by the Council on Pharmacy and Chemistry or by any other body, is to be found than in the passing experience with Ehrlich's much advertised specific for syphilis, popularly and euphoniously yclept (*à la* Humphrey) "606."

According to numerous "official" rulings all advertising of this remedy and all "mentions" of it in a commendatory way should be rigorously barred from *The Journal of the American Medical Association* and the affiliated state journals until the product has been solemnly quarantined, inspected and marked "passed" by the Council. Only recently one of our pedestaled practicians has stated that he would not even *think* of trying a remedy until its clinical investigation had been officially sanctioned. Yet the national *Journal* is filled with articles praising this patented, privately owned and proprietary specialty, and no great and good guardian of our therapeutic morals has risen with a single whisper of protest.

On the other hand, if this remedy is what it promises to be, one of the greatest medicinal discoveries ever made, one which will cure cases heretofore thought incurable, saving thousands of lives, isn't it the duty of every physician to learn all about it as quickly as possible, and the duty of every medical journal to give all the available facts concerning it? And what has the Council got to do with it—or with us—in the meantime?

It seems to the writer that the editors of some of our truly good journals are astride a dilemma, which just at present must be bucking like a Texas bronch'.

Oh Heart, sing on! the drought is long,
The birds are panting—stilled their song;
The typhoon marshalls in the plain,
The air is hot, no sign of rain,
But still, Oh Heart, sing on!

—Richard Wightman

THE NEW PHARMACOPEIA: WHAT SHALL IT CONTAIN?

In *The Bulletin of the American Pharmaceutical Association* Dr. S. Solis Cohen contributes a paper on "The Scope of the Pharmacopeia," which is so full of common sense that we wish we had space for its complete reproduction.

In this paper Dr. Cohen points out that the Pharmacopeia is not a work on therapeutics, also that the admission of a drug to its pages should not be taken as evidence that the same is accepted and recognized by all or even by the greater portion of the profession. Neither should a drug be refused admission because certain experimenters failed to find evidence satisfactory to them as to its value. In this connection he instances cactus, which has been pronounced inert by some writers, as the result of experiments on animals, while, on the other hand, good authorities, studying the drug from the clinical standpoint, pronounce it possessed of great value

"I am neither afraid nor ashamed," says Dr. Cohen, "to appear in such excellent company as that of Dr. Roland G. Curtin of Philadelphia, in support of the high clinical value of cactus, when a good preparation is properly used, in suitable cases. Here is the point: a *good* preparation, *properly* used, in *suitable* cases. One who has not used a good preparation of a drug under discussion; or has not used it properly; or has prescribed it in a case for which it is not suitable; or one who has never used it clinically at all, is not in a position to dogmatize as to its value. He may properly criticize, suggest, demand evidence. But he cannot properly condemn in the face of competent evidence in its favor; and it is the opinion, and not the drug, that in such a case is to be considered worthless—or at least needs to have its 'value established.'"

Dr. Cohen wisely objects to the exclusion from the Pharmacopeia of the crude drugs even when their active principles are admitted; and in this we concur. One of his strongest points is one that would not occur to the experimenter, but would instantly appeal to the clinician. He argues that even when such a drug as digitalis has been established as the most reliable heart tonic, this does not mean that others of the list should be excluded, for when continued medication for a long period is necessary, it is desirable to vary the medication, not giving any one agent too long, since the system becomes habituated to it. We are all familiar with the fact that after giving a single medicine a certain period, the substitution of a closely allied one gives, instantly, better results.

The writer is glad to see that Dr. Cohen does not believe in reducing the number of articles to be admitted into the Pharmacopeia to accord to individual preferences and scholastic or sectional prejudices. Southern physicians use passiflora and veratrum viride largely (northern physicians might well take a lesson from their experiences); therefore he believes that these substances should be recognized by the Pharmacopeia. "The Pharmacopeia," he argues, "being a book of legal as well as professional standards, both rich and poor are entitled to its protection, and both elegant and cheap remedies must be included; both crude drug and active principle; and as many preparations, in reason, as physicians may require."

It is to be hoped that the wise counsels of men of large and varied clinical experience, like Dr. Cohen, may have a strong influence with our new Committee of Revision which is just now entering upon its great task of creating the ninth edition of the United States Pharmacopeia.

Who bides his time, and fevers not
In the hot race that none achieves,
Shall wear cool-wreathen laurels, wrought
With crimson berries in the leaves;
And he shall reign a goodly king,
And sway his hand o'er every clime,
With peace writ on his signet ring,
Who bides his time.

—James Whitcomb Riley

THE REVIVAL IN THERAPEUTICS

Under the above head *The Gulf States Journal of Medicine and Surgery* contributes a brief but significant editorial.

As the causes of the therapeutic nihilism of the recent past are given the great number of useless articles in the Pharmacopeia, and, further, the uncertainty of action of even the best of them, the conflicting opinions concerning their therapeutic effects, and the hopelessness of trying to learn anything practical by exploring this tangled wilderness.

The present revival in the study of the materia medica is largely attributed to the correction of these conditions. Some teachers selected from each botanical group its most useful members. Others omitted the botanic unessentials. Certain bright irrepressible geniuses pushed forward the alkaloids and other active principles of many vegetable drugs, and in most modern textbooks all therapeutic agents are classified so as to be studied in groups characterized by one dominant effect.

The result is that the study of materia medica and therapeutics has been promoted to the laboratory, and has become a pleasure instead of a hopeless task.

This is one more evidence of the fact that at last the attention of the best elements of our profession is again being directed to the

study of the vast field of drug-therapeutics, instead of being monopolized by the addenda which, while useful and valuable, nevertheless are simply addenda and not comparable in importance to the therapeutics based upon drugs.

It is faith in something and enthusiasm for something that makes a life worth looking at.—Oliver Wendell Holmes.

DEVELOPMENT OF THE DRUG REVIVAL

I have always believed in Hobart A. Hare. Even when his first books appeared and examination demonstrated that they were in the main compilations made by a very good compiler, but one who had had, at that time, little experience in real medical work, I believed that these books contained the promise of a great future; and each succeeding edition of his principal work has confirmed this first impression. With every passing year Professor Hare is becoming more of a power in therapeutics, a recent editorial in *The Therapeutic Gazette* serving to illustrate his own broadening thought, as witness the following comment:

"In the way of refreshing contrast we quote from an article contributed to *The Boston Medical and Surgical Journal* of July 28, 1910, by Tyrode, who is at once a clinician and a pharmacologist. He says: 'In spite of the efforts of cranks on psychotherapy, dietetics and physical therapeutics to abolish the use of drugs or belittle their advantage in the treatment of disease, these therapeutic agents have persisted and are still flourishing after the late passing period of therapeutic nihilism. This is very encouraging, because unquestionably great good is being done every day by the proper use of drugs.' And again he says: 'It is unnecessary to defend the rights and accomplishments of drugs in modern therapeutics because the results obtained speak glowingly for themselves.'

"We believe the duty of the physician is:

"1. To cure his patient or to relieve him by the employment of every means which have proved useful in the past.

"2. To be careful not to do harm by undue therapeutic activity.

"3. To place all his measures upon a scientific basis as soon as science can give him the facts. Until then he must use the results of experience and hope that a satisfactory explanation for his clinical results will be forthcoming."

A man who favorably comments on, or himself voices, such sane therapeutic sentiments is very far from being a therapeutic nihilist. Assuredly, I believe in Dr. Hare, who expresses, in cogent way, the new faith in therapeutics, a faith built upon a careful, scientific study of our medicinal agents, and one which must rest, in its finality, upon the employment of remedies which are invariable in strength, uniform in action. Every guide-post points toward the active principles!

You have heard of St. Chrysostom's celebrated saying in reference to the Shekinah, the Ark of Testimony, visible Revelation of God Among the Hebrews. "The true Shekinah is Man!" Yea, it is even so; this is no vain praise; it is veritably so. The essence of our being, the mystery in us that calls itself "I,"—ah, what words have we for such things?—is a breath of Heaven; the Highest Being reveals himself in man. This body, these faculties, this life of ours, is it not all as a vesture for that Unnamed?—Thomas Carlyle.

"THE AMERICAN FOOD JOURNAL"

The number of publications issued from the American press is beyond computation. From the enterprise of the circulation promoter, we are deluged with innumerable propositions for passing our good coin over in exchange for one or more of these meritorious productions. But since not even the purse of a Carnegie could pay for all these journals, it is necessary for us to make a choice.

In this practical day, age and land the first question to be asked concerning any of these is, "Can I utilize it in my business?" Judging from this standpoint, *The American Food Journal* ought to have a circulation with scarcely a limit, for there is not a family in the country which would not find every number of this journal of inestimable value to them.

What careful provider for her household could fail to find a guide for her marketing, in its account of food-products condemned by the Government for adulteration, mis-

branding, short weight, and so on? It makes a difference if the two-pound can of baked beans contains five ounces less than for what we are paying; if our "maple" syrup is composed of glucose with a little decoction of maple added; if our pepper is largely composed of powdered olive pits, our chocolate of bullock's blood, brickdust and charcoal, and the ice-cream cones on which our children regale themselves in warm weather consist of a concoction of abominations a description of which scarcely is fit for publication.

I really think that if each reader of these lines were to send to H. B. Meyer & Co., 160-162 Washington Street, Chicago, for a sample copy of this monthly and leave the same in his office, for his patients' perusal, in the place of those medical journals he ought to keep carefully secluded from the laity, he would be doing these people a service they would not fail to appreciate.

As for ourselves, in common with other editors, we know a very great deal more than the general run of mankind, even in our own profession; nevertheless, we have never perused a copy of the magazine in question that we have not found in it edification, food for thought, and material of such practical value that we can not resist the impulse to pass it along. The work being done under the Pure Food and Drugs Act is all epitomized here. The practical workings of this most important act and its far-reaching influence are here shown in a way which ought to be known to every citizen who is interested in the question of whether he is buying and putting into his stomach really pure foods or a generous proportion of dirt.

One interesting point we gather from the last issue of *The Pure Food Journal* is that one well-known pharmaceutical house was fined for misbranding a drug, the extract of damiana; the objection being to the statement that it was an aphrodisiac, "when in fact it has no such qualities." We live, and sometimes learn.

The condemnation of several popular brands of whisky, because they were not whisky but combinations of grain distillates, would of course not interest any of our readers personally, but might appeal to their patients. That MacLaren's "Roquefort" cheese is not Roquefort, and does not have the properties of Roquefort, is edifying; so also are the facts that celery-kola has been condemned as containing caffeine and cocaine; that coke-extract contains cocaine, as also does kola-ade; that King's quick-rising buckwheat flour is in part composed of wheat flour; that Barrett & Barrett's "charm" brand 40-grain cider vinegar consists of a mixture of diluted acetic acid and cider vinegar artificially colored; that Lombardo's La Tosca hair tonic contains 98.5 percent wood alcohol; that Ryno's remedy for hay-fever and catarrh contains 99.95 percent cocaine hydrochloride; that the Michigan Produce Company's Neufchatel cream cheese is made from skimmed milk and contains much starch; that the Dayton Spice Mills' Dutch Java blended fancy roasted coffee contains little or no Dutch coffee; that the drug known as "mother's friend" does not, as claimed, alleviate the suffering incident to child-bearing; that the mineral water denominated Susses Wasser is not of German origin; that Blanke's Dutch Moka coffee is a Santos product; that McIlvaine Bros.' powdered colocynth is a powder of the seeds as well as the pulp of the colocynth apple; that Horn's "telephone" headache tablets, guaranteed absolutely harmless, contain acetanilid; these are some of the interesting features of *The American Food Journal* of October 15.

Every great captain in life's procession carries the flag a certain distance to the front and there he plants it. The task of carrying it still farther belongs to another.—The Fra.

THE DEATH OF PROFESSOR HALLBERG

We were greatly shocked to learn of the death of Prof. Carl S. N. Hallberg, of the University of Illinois School of Pharmacy, on October 23, 1910. When we last saw him, at the meeting of the American Medical Association at St. Louis, in June last, he seemed to be in usual health. He was acutely ill for a few weeks only.

Professor Hallberg was one of the most striking and aggressive figures in American pharmacy. He was a splendid teacher, a forceful writer, and a man of much originality of thought. Wherever there was a fight

in the things that concerned his profession there he was to be found—and "on the firing line." He was a member of the Revision Committee of two (or three) editions of the United States Pharmacopeia, was prominent in the work of the American Pharmaceutical Association, being the editor of its *Bulletin* from the time it was founded, one of the original promoters and first secretary of the Council on Pharmacy and Chemistry of The American Medical Association, and for several years secretary of the Section of Pharmacology of the same medical body.

Hallberg was a fighter, and he was a foeman worthy of any man's steel. We know—for more than once have we crossed swords with him, and in contests where neither side asked nor expected quarter. Between us, in many things, there could, necessarily, be no agreement; but we are glad to add our testimony to that of others who have known him intimately, to our belief in his unquestionable and unswerving integrity. His very allegiance to truth as he saw it made him strike friend and foe alike with the same unsparing and too often bitter blow—but the blow was delivered as honestly as it was courageously.

With the death of Hallberg there passes into the Great Beyond one of the most interesting and unique pharmaceutic figures of our time, a man who has helped to make medical history.

CUSHNY, AND THE ACTIVE PRINCIPLES

If you wish to realize what progress the study of the alkaloids and other active principles has made in recent years, just get a copy of the just-issued edition of Cushny's "Pharmacology," and compare it with other similar works written ten years ago. You need not go further for this than the index, where you will note that crude drugs are mentioned scarcely at all, but the active principles are discussed almost exclusively. However, one should not stop at the index; let him give this excellent work the full study which it deserves.

The progress of drug-therapeutics, since the revival of interest in this branch about ten years ago, has become so intense that one who has not kept pace with it will be amazed at the showing made in this the most recently produced textbook of this nature. This is all the more notable since Cushny is one of the most conservative of writers and thinkers and not in the slightest degree influenced by the waves of popular opinion. This, the fifth edition, is published by Lea and Febiger of Philadelphia and New York, and is a volume of 744 pages illustrated with 61 engravings.

ATROPINE, ACONITINE AND GLONOIN IN HEMORRHAGE

There seems to be a concensus of opinion among the experimental therapeutists that the proper treatment for hemorrhage is by the use of agents that reduce vascular tension. This is in accordance with the clinical observation that hemorrhage ceases when the flow of blood has reduced the heart action to a certain point. In accordance with this theory is the observation of Dr. Rendtorff, of the United States Indian Service, as related in the September number of *The Medical Council.*

In this same paper, among other things, Dr. Rendtorff speaks of the successful application of aconitine as a remedy for active hemorrhage.

Aconitine is primarily a relaxant. By stimulating inhibition, it checks the force and the frequency of the heart action, while, by relaxing vascular tension generally, it lessens the impulse which projects the blood from the open vessels. In this respect it occupies the place which the older physicians filled by venesection.

But it is obvious that this treatment is not suitable for all forms of hemorrhage, since it acts by reducing the blood flow to a point just beyond which lies danger, danger increasing with every further drop of blood lost. Neither the method nor the remedy is therefore ideal for the treatment of hemorrhage.

Observations collected from many sources seem to show that atropine comes much nearer the ideal, in its suitability for many forms of hemorrhage, and in the fact that, operating upon a different principle, it appeals more strongly to our fears; for atropine

is hemostatic because it increases capillary attraction, and thus tends to bulk the blood into the vast capillary areas, from which it is comparatively less liable to reach the bleeding spot. Atropine actively stimulates the vasodilators, causing an active, not a passive, dilation of the capillaries; the result being that, even when a capillary area is opened by a wound, the blood is retained in these vessels, just as it would be in a capillary tube of any other nature.

It would seem that these two agents might, in such instances, be synergistic, although they are antagonistic in other respects. For if atropine actively stimulates the vasodilators, while aconitine is relaxing the vasoconstrictors, we have, from the union, a double effect, and the consequent impounding of the blood in the vast capillary area is greatly enhanced. It must be remembered that the capillary system has about seven hundred times the capacity of the arterial system for blood, hence a comparatively slight increase in capillary attraction or capacity would enormously relieve the tension in the arterial trunks. While either of these remedies might accomplish the purpose, it is better, as a rule, to employ the combination than to use either one alone, because in this way we obtain our object with a smaller dose of each. This is always desirable, because it is an axiom in scientific therapeutics that the results desired should be procured with the least-possible dose of the remedy. Overstimulation is thus avoided, with the consequent reaction.

This explains why it is that aconitine and atropine, given simultaneously, are more effective in the treatment of tonsillitis than either of these agents when given alone; for as atropine dilates the blood-vessels actively and aconitine does so passively, we have a twofold increase in their capacity outside of the inflamed area, and so a draining-away from the tissues; and, by reducing the hyperemia, the force of the inflammatory attack is broken.

As in the treatment of the first stage of the epileptic convulsion with glonoin and atropine, if the first stage of a pathologic process is stopped, the second stage will not follow, inasmuch as for the latter the first stage is required for its development. The first step in vice needs must precede the second. No man will get drunk if he refrains from the first glass.

To these two potent agents, aconitine and atropine, we may, as a rule, add a third, glonoin. The object of this is to secure quicker action, as by its instantaneously dilating the blood-vessels the other medicaments pass more rapidly through the circulation to the point which they are to affect. Besides this, glonoin instantly relieves the cerebral anemia and consequent faintness, which forms the most imminent danger in hemorrhagic maladies.

Here we come again to that curious principle which seems to permeate the application of medicinal agents, namely, the formation of therapeutic trinities; and those who have a taste for the occult might readily spin a fascinating although tenuous web of conjecture over this odd phenomenon.

Burggraeve's studies led him to the dosimetric trinity, aconitine, digitalin and strychnine, which probably is of more frequent and general applicability than any other combination of the active principles. Abbott's observations, in like manner, led to the defervescent compound of aconitine, digitalin and veratrine. That tremendously powerful antispasmodic union of glonoin, hyoscyamine and strychnine forms a third triad. All have approved themselves as of especial fitness in meeting the indications presented by clinical studies.

DOSAGE OF SPARTEINE

In *The Southern Medical Journal* Prof. MacNider publishes an interesting and important study of sparteine. His experiments were carried out under strictly scientific conditions and the care with which they were made gives unusual value to his results obtained.

Administering intravenously small doses of sparteine, 1-2 to 1 cubic centimeter of a 10-percent solution (gr. 1-12 to 1-6) the blood pressure rose slightly, then returned to normal. No change took place either in the heart-rate or the rate and extent of respiratory movement. There was no evidence of a diuretic action. This experiment was repeated on four animals.

With the fifth experimental animal the same technic was employed, but larger doses were given, namely, 4 cubic centimeters of a 1-percent solution (gr. 5-8), while the sparteine in this experiment was obtained from another source of supply. In this instance the administration of the drug was followed by a fairly rapid rise in blood pressure—from 120 millimeters of mercury to 152—this rise being persistent. With it the output of urine increased markedly, and this also persisted. It is unfortunate, though, that the present study leaves doubt as to whether the results in the last experiment were due to a different agent having been employed under the name of sparteine or to the much larger dose employed.

So far as the study goes it confirms Pettey and Maguire as to the value of sparteine when given in much larger than the customary doses. We trust that Prof. MacNider may complete his study to clear up the question left unsettled.

To live in the presence of great truths, to be dealing with eternal laws, to be led by permanent ideals—that is what keeps a man patient when the world ignores him, and calm and unspoiled when the world praises him.

Francis G. Peabody.

ADULTERATED DRUGS

A magazine article of recent date says:

"Five tons of olive pits were received in the New York customs office not long ago. They were consigned to a dealer in crude drugs, who declared they were to be used in the manufacture of a patent chicken food. The customs officials did not believe the man's declaration, and reported the instance to government chemists at Washington. Within few weeks the chemists began to sample and test the drugs made by this firm. They bought belladonna and found it half olive pits. They tried poke-root, and the olive pits comprised 30 percent; gentian was all olive pits; ipecac was 40 percent olive pits.

"Isaac Russell, in *Pearson's Magazine* for June, gives the above instance as an example of how drugs are being adulterated in the United States.

"And all the time," says Russell, "the physician is wondering why drugs of vegetable origin vary so in potency in different cases."

"'Ground olive pits are not the only stomach irritant the sick are likely to receive when they call for something soothing,' says the writer, and he culls from many government investigations a long series in which the adulterants range all the way from plain river sand to broken twigs and stems of shrubs.

"In henbane, 28 percent of the supposed drug was sand. In anise, a stomach stimulant, sand formed 25 percent. Cumin, of which only the fruit is valuable, contained four parts of stems and chaff. Belladonna was found to be four parts chaff to one of the leaves which are famous as a soother for irritation and pain; benzoin, one-half chopped bark and sand; balsam of Peru suffers adulteration in the same way; nux vomica often comes to the drug dealer as a worthless seed, rolled in clay, and mixed with the pulp of the nux vomica fruit.

"Many other adulterations of drugs are noted, 'skin foods,' laudanum, quinine and headache powders among them."

Well, why do you use the trash, when you can get the pure, clean alkaloids, without the encumbering dirt? You do not have to put up with ground olive pits, or inflict on your unfortunate patients a mess of sand, stems, chaff, clay, and other refuse for the sake of a little bit of alkaloid possibly contained therein.

"I've made it a practice to put all my worries down in the bottom of my heart, then set on the lid and smile."—Mrs. Wiggs of the Cabbage Patch.

GLAUCOMA CAUSED BY AUTOINTOXICATION

An important paper on the Pathology of Glaucoma appears in a late issue of *The Lancet-Clinic* from the pen of Dr. C. H. Castle. From this we quote the following passage, as it emphasizes what we are constantly trying to inculcate.

"The action of morbid ferments or bacterial toxins derived from the intestinal tract has now for some time past been definitely acknowledged as an important factor in the causation of systemic disease. The passage of microorganisms into the tissues from the

intestinal tract is constant even under normal conditions. The tissues of the body are able to cope with the germs and render them inocuous provided they are not too virulent or present in too great numbers."

Describing the morbid anatomy of the disease, Dr. Castle ends his dissertation as follows: "All of these things should justify us in regarding as the initial and continuing cause of glaucoma an autogenous intestinal intoxication."

Again we have an illustration of the verity of the great principle upon which we have insisted with such strenuousness through all these years—that the care of the alimentary canal is of vital importance; that it is essential to the cure of disease—practically all disease, whether acute or chronic—to "clean out, clean up and keep clean."

ON MEDICAL TEXTBOOKS AND INDEXING PERIODICALS

"Of the making of many books there is no end." This saying of Ecclesiastes (XII, 12) is, perhaps, nowhere as true as it is in medicine, and the number of medical textbooks with which the market is annually flooded is terrifying to the reviewer and puzzling to the practising physician.

The busy practician, if he finds only little leisure for study, cannot decide which one of the many writers on a given subjec has probably presented this in the best, clearest and most concise manner. He is likely to forget that the brilliant operator and the keen diagnostician are not necessarily lucid writers, nor will he consider, perhaps, that a learned and fascinating lecturer does not always possess the gift of being equally interesting when putting down his thoughts in black and white. For this reason the general practician is quite at the mercy of the persuasive book agent and liable to pay dearly for a well-known name which decorates the title page of some, possibly, dull and mediocre textbook.

The idea prevails among physicians that the books on their shelves should be renewed every few years. That is very true, and the reason for this has been excellently expressed by Dr. P. C. Freer in his Commencement Address to the Philippine Medical School, as reported in *The Bulletin of the Manila Medical Society*, April, 1910. This is what Dr. Freer said:

"A scientific textbook is already beginning to approach middle age in its second year, and, with the exception of a few great works, is dead in five if it be not methodically revised. We are too much the slaves of the textbook habit. Each teacher with some power of presenting his subject feels called upon to write for his classes so as to make his task of instruction the more easy, and each publisher is compelled, in order to see a profitable return for his investment, to push the sale of the work in all directions. The consequence is a war of textbook writers and textbook printers, from which those with higher aspirations often turn in disgust."

Then, however, the speaker went on to point out the great, but too often overlooked, value of the periodical and ephemeral literature of the period, as follows:

"A good textbook is a good thing if modern; it is useful for reference, it is concise in laying before the student the main ideas of the work he is undertaking. But neither teacher nor pupil must ever forget the broad range of original literature which is embodied in the journals, periodicals and monographs of his science and which is collected for use in the larger scientific libraries of the world. These contain the original sources from which, directly or indirectly, the textbooks are more or less imperfectly compiled; these contain the inspiration leading to greater and higher work. All advance in science is brought about by a great number of individuals, each perfecting his small portion of the whole and embodying it in his particular publication for the use of all."

These words embody a very important truth and should be remembered. The current medical literature, the journals and pamphlets, contain the live, growing, *developing* knowledge of the time. Textbooks present a review of the accumulated knowledge up to a given point of time and are all too often its grave. Thus it is of paramount importance for the physician who desires to keep abreast of the times to study and index the periodical medical literature, while, as for

textbooks, a judicious selection is imperative.

We have before now (CLINICAL MEDICINE for May, p. 487) called attention to the permanent value of many textbooks and compilations. A physician who possesses a wisely selected collection of textbooks, who reads and indexes his medical journals and the many good reprints and pamphlets coming to him, whether as advertisements or otherwise, need not replace his entire library every few years, nor need he have fear of becoming a back number. With an occasional new book added as a certain amount of knowledge is rounded out and presented in book form, a file of the best medical periodicals, properly preserved and made available, is better by far than a multitude of new books, and it is cheaper. And if you want to know which among the new books is best, the members of our editorial cabinet are ready at all times to tell you as far as lies within their power. Write and ask us.

"Everything comes to him who hustles while he waits."

"HOW NOT TO DO IT"

Our sprightly contemporary, *Medical Notes and Queries*, has an uncomfortable way of poking an inquisitive finger between the ribs (so to speak) of our most cherished ideals. Those of our cloth who have been nurtured in the belief that there is no prophet save Mohammed and that they are walking reverently and accurately in the sacred footsteps of the Great and Holy *may* be made to writhe at the impact of the editorial digit—and maybe not. In any case, the following is interesting:

> Statistics seem to show that both in matriculants and graduates the medical schools of the United States have a much smaller number to show in the last few years than in the years preceding; that year by year fewer men enter the medical schools and that fewer graduate. This is considered a great gain and a thing to exult over—done, of course, by raising the standards, by Carnegie Foundations and by the special investigations of the American Medical Association. But how about the growth of "isms" in the last ten years and the decided trend of legislation by which they are ennobled and placed on the footing of state recognition, or, as in the case of Christian science, of state toleration? Are there fewer ignorant men and women practising on the easily deluded public than before? Is it not very much the other way? Never since the states existed have physical and mental quackery and the use of drugs by those ignorantly prescribing flourished so riotously; and the process we imagine will still go on, the properly (?) educated physicians grow less in number, and the medical freaks hold their heads higher, while new freaks of previously undiscovered species spring to light day by day. Slapopraxy and spankopraxy and wireless therapy are already gazing eagerly over the wall that for a moment stays their triumphant career and shuts them away from the dear people, the willing gulls, their legitimate prey; but wait a year or two, and, lo! they will have a representative on the examining boards and be as good as the best. Thus do we raise the standard for them! Does it pay?

Wouldn't it be a good plan for our benevolent leaders and would-be educators to pay some attention to the needs, financial as well as intellectual, of the doctors that *are* as well as to the needs of the doctors that are *going to be!*

Even though we may not turn quite so eagerly aside from our daily dollar-garnering tasks to the knee-deep pastures of hypothesis which lie all around us, as our teachers would have us do, there are certainly few of us who would not be glad to know why the public distrusts us and how we can get and hold the patients who now enrich the medical freaks. Would it not be worth while to direct some of our surplus energy (if we have any such surplus) into a movement which would have for its double purpose the increase of our own efficiency at the bedside, and the rehabilitation of our profession in popular favor?

We have advertised our weakness long enough. We need to advertise our strength —and have some to advertise!

CROTALIN USED IN EPILEPSY

In *The New York Medical Journal* Dr. Fangler reports eleven cases of epilepsy treated with crotalin in solution, his initial dose being 1-200 of a grain, gradually increased to a maximum of 1-12 of a grain.

Dr. Fangler found that in each case the attacks had been modified as to severity while the intervals between them were lengthened. In one patient subject to convulsions there had been no recurrence for six months after treatment with crotalin had suppressed the symptoms. The local reaction varied with individual susceptibility.

As a rule, the oftener the injections were given, the less marked was the local reaction

No depressing effects on any of the vital functions were observed. In all cases a sense of well-being followed.

As we have shown before, it is a mistake to employ this remedy in the form of solution, the active principles being so fragile that decomposition quickly results, resulting in a certain amount of deterioration of strength and the possible generation of matters more toxic or septic than is desirable

As yet we have heard of no one who employed hypodermic tablets in anything like such doses as Fangler describes. It is better to begin with 1-400 of a grain, as the startling effects of too large a dose are liable to discourage the patient and interfere with the thorough testing of the remedy.

He who knows not, and knows not that he knows not:
He is a fool—shun him.
He who knows not and knows that he knows not:
He is ignorant—teach him.
He who knows, and knows not that he knows:
He is asleep—awake him.
He who knows, and knows that he knows:
He is wise—follow him.

THE DISPENSING OF POISON BY MEDICAL PRACTICIANS

"In *The Lancet* of January 29 attention was drawn to an inquiry held at Fulham coroner's court, and more especially to the fact that the jury asked the coroner to lay the circumstances of the case before the Home Secretary, 'in order that legislation providing a distinctive form of bottle might be brought about.' It was pointed out that the regulations as to the methods of storing and dispensing poisons, with which pharmacists were by law compelled to comply, were not applicable to medical practicians, but it was suggested that this fact in no way lessened the obligation of medical men who dispense to carry out the same methods of safety to the public as if the law was obligatory upon them."

We quote the above passage from an editorial in *The Lancet* for March 5, because it brings up a matter which dispensing physicians might well consider. Poisons and active drugs are, only too frequently, simply stored on the drug shelves in the physicians' offices, the latter not always locked when the doctor is away, so that anybody entering the room during his absence may, if so minded, help himself. If, perchance, the office communicates with the doctor's residence, and if his children have access to it, there is all the more reason why potent drugs should be locked away, because the pretty little pills in their pretty little bottles exercise an all but invincible attraction to the little mischievous hands—and from hand to mouth there is but a very small distance. Thus the present writer well remembers how, as a child, he discovered his father's medicine-box filled with pretty litttle sweet granules in tiny vials, and how he and his brother used to levy contribution upon it, emptying a vial at the time. Fortunately the vials contained old homeopathic granules and no harm was done, although many hundred granules were devoured in the course of a few days.

Physicians who dispense their own medicines, especially if these are the active principles, should keep them safely under lock and key, nor permit anyone to have access to them. This is important from the standpoint of prevention, because even one instance of illegal use of a poison obtained from a dispensing physician's cabinet would strengthen immensely the argument of those opposed to dispensing, and they would not be slow to avail themselves of it.

THE THERAPEUTIC VALUE OF VERATRINE

Folia Therapeutica rarely fails to contain something well worth reading, even on the part of a well-read and practised therapeutist. Sometimes, however, it does publish things one would wish had not been printed, and this is the case with a paper in the July number of the present year, a good example of misleading half-knowledge.

In an article appearing on page 62 the writer speaks approvingly of veratrum viride, quoting Landis, whose very favorable report on the drug appeared last spring in *The Lancet-Clinic*. Then speaking of the use of this drug in puerperal eclampsia, the author says:

"It is sufficiently well attested to make it quite sure that those who do not use it are

neglecting a very definite aid to the treatment of ecalmpsia." Further on he expresses himself as follows:

"Perhaps the reason for the neglect of veratrum is to be found in the uncertainty which exists concerning its active principles. It is important to understand that veratrum viride has nothing to do with veratrine. Veratrine exerts a specific effect on the contraction of muscle, altering the contraction in such a way as to imitate the muscular spasm seen in Thomsen's disease. Clinical experience has not indicated any useful employment for veratrine in the sphere of internal medicine."

The writer of this article does not seem aware of the fact that aconitine and veratrine are at present used as the commonest of everyday medicaments by more than fifty thousand physicians in America alone, and, further, that veratrine has been shown to possess exactly the qualities for which veratrum viride is given, veratrine presenting the additional advantage of affording those effects in a definite, uniform and speedy manner, without the irritation which any tincture exerts when used hypodermically.

Cushny, in the edition of his "Pharmacology" just issued, says (page 361): "The effects of veratrine on the central nervous system and on the sensory terminations resemble those of aconitine very closely. On the other hand, the muscles present a curious reaction to veratrine which is entirely absent in aconitine poisoning. Veratrine increases the force and prolongs the time of muscular contraction."

When given in small doses, as is invariably the case with those who are now making such extensive use of this alkaloid, veratrine energizes the cardiac contractions while relaxing the tension of the arterioles.

Again, on page 394 Cushny says: "The ventricular systole is at first stronger and prolonged. Somewhat later one part of the ventricle is seen to remain contracted during the alternate diastoles of the rest, and waves of contraction spread over the heart, resembling the peristaltic movement of the intestines."

Clinically, veratrine has been found to relax vascular tension with certainty, and to increase markedly elimination by the liver, the skin and the kidneys. This gives the indication for its employment in febrile maladies, where the elimination of toxins and the relaxation of spasmodic vessels form the most imperative duties of the physician.

I am in a position to correct the observation of the writer in *Folia Therapeutica* by stating that many millions of doses of veratrine are prescribed by the American medical profession every year, and that this alkaloid has proved one of the most satisfactory of the active principles which have as yet come into use.

In comparison with glonoin and the other nitrites, the action of veratrine in relaxing vascular tension is so much more prolonged as to permit it to be administered for months or even years in cases where such a continuous relaxation of abnormal tension s desirable. In this respect veratrine differs from the nitrites, in that all the latter group, while speedy in getting to work, have so brief a period of activity that they are unsuited for such continuous relaxation of the blood-vessels.

Between these two drugs named stands digitonin, a more recent introduction, but which promises to fill an important place. It is not quite as quick in getting to work, but its effects last from one-half to one hour.

Cushny asserts that veratrine used externally is a better and safer remedy than aconitine, and in one sense this is also the case as to its internal administration; for an overdose of veratrine quickly makes itself evident by irritation of the stomach, inducing emesia, whereas aconitine, being a local anesthetic, does not give this element of safety.

However, this is a matter of indifference to those who are familiar with the use of these two remedies, since the habit of giving minute and frequently repeated doses until the desired effects have been secured renders such a thing as an overdose an impossibility. Both remedies present the further advantage of providing for their own elimination, and in this respect offer a marked contrast to such remedies as digitalis and morphine which, by tending to lock them-

selves up in the system, are liable to disastrous ulterior effects.

NOT SATISFIED!

Some men never know when they are well off, or feel contented, no matter what they may have gotten. Among these is our Health Officer Dr. W. A. Evans. One would think that an annual death-rate of 13.2 per thousand, in the great city of Chicago with its cosmopolitan population, ought to satisfy any reasonable sanitary officer; but instead of being satisfied, Dr. Evans is still energetically urging the people to ward off the danger from flies, from impure foods, infected milk and other unhygienic conditions. The time will come, if similar progress is made in sanitation, when we shall have to be sanitarians instead of doctors. Query: Is it not worth twice as much for a man to keep well as to be cured?

TONSIL OPERATIONS AND SYSTEMIC SEPSIS

The Journal of Ophthalmology and Oto-Laryngology, not long ago, contained an interesting account of a report made to the Chicago Laryngological and Otological Society by Dr. L. W. Dean. Three patients in whom tonsillotomy or tonsillectomy had been performed soon afterward showed symptoms of severe infection, two recovering after a prolonged illness.

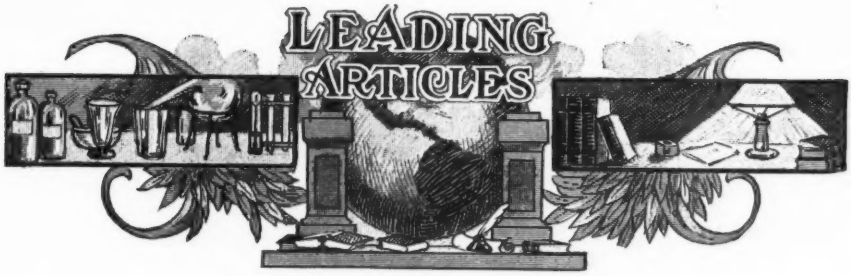
The discussion brought out the fact that the infection may be either primary, i. e., that the germs are introduced during or soon after operation, or it may be secondary, by continuation from the nares or nasopharynx. In any event, active after-treatment is important in order to prevent the infection of the raw surfaces or stumps, and we are impressed with the remarks of Dr. O. T. Freer; who regards the knife as safer than the snare, because the latter bruises the tissues, which then forms an excellent culture-medium for bacteria.

Even more justified appears to us the opinion of Dr. E. Pynchon. After calling attention to the intimate relations existing between the tonsils and the lymphatic system, which makes it very easy for any infection to extend from the diseased gland into the general lymph current, particularly the cervical glands, he gives it as his opinion that an effort should be made to close the openings into the tonsil hermetically to prevent this spread of infection. For this purpose Dr. Pynchon has, for the last twenty years, been doing tonsillectomies by means of cautery dissection under local anesthesia, and he has never seen general sepsis following this operation. He directs the patient to gargle his throat regularly every fifteen minutes for the greater part of the first twenty-four hours. After that, every half hour for several days.

LOCALIZING NERVOUS MALADIES

A glance at the cerebrospinal axis and the ganglional system suffices to convince one of the impossibility of separating the affections that appear in each of these localities. The connections are too close. Taking into account the rapidity of the communications and the close anatomic connections, one must recognize the puerility of affected localizations. Every disturbance occurring at any point of the nervous system will resound throughout all. There may be one or many echoes, but the shock will be general.

It is no easy matter to locate the point where the alarm was sounded, for a vicious circle is quickly formed. Excited by morbid reflexes, the brain will in its turn send out its orders for irritation in organs hitherto unaffected. A centripetal irritation emanating from any point in the great sympathetic reaches the brain, recoils in movement—eclampsia, convulsions, etc.; but if the irritation stops at the brain, either because it is too strong to radiate (the irritated nerve losing its electromotor force), or that the motor conductors are disabled, nervous phenomena arise; and we shall have either the depressive form of cerebrospinal irritation, or the maladies properly designated as voluntary—maladies of contracture, or of arrest.



The Wassermann Test

In the Diagnosis and Prognosis of Syphilis

By E. J. ANGLE, A. M., M. D., Lincoln, Nebraska

EDITORIAL NOTE.—The discovery of the specific cause of syphilis, the spirochæta pallida, by Schaudinn, of the serum test by Wassermann, and of a possible cure by Ehrlich, are epoch-making, both as regards the study of this disease and also in their effect upon the possible future of mankind. The Wassermann test, as the matter of first importance promises certainty in diagnosis. For this preeminent reason every physician should understand it, and be prepared to put it into application.

IN the past few years history has been made in syphilology. First, in 1905, came the announcement by Schaudinn and Hoffman of the discovery of the spirochæta pallida, which ended the quest so diligently carried on by scientists for a quarter of a century. In the following year, Wassermann, Neisser and Bruck announced that the Bordet-Gengou reaction could be applied to the diagnosis of syphilis. Only two weeks after that publication, Detre announced a system which was, at least theoretically, the equal of Wassermann's. Detre used horse's corpuscles and antihorse-amboceptor, with rabbit's serum for complement. Bauer, Hecht and Stern have variously modified the Wasserman system, all of which are open to well-known objections. Since Wassermann's discovery an enormous amount of work has been done, and today its value as a diagnostic measure is beyond cavil.

The Noguchi Modification

More recently Noguchi has devised a system which has the recommendation of having a more simple technic. The Noguchi test is based upon the same principles as that of Wassermann, being, in fact, merely a modification of the latter. The difference of the two is in the hemolytic system employed. Noguchi uses human corpuscles as the indicator, and an amboceptor for human corpuscles instead of for sheep's corpuscles. The antigen and complement are the same both in the Wassermann and Noguchi methods. Five elements enter into each: amboceptor, complement, antigen, suspension of blood-corpuscles (sheep's in Wassermann's, human in Noguchi's), and the serum to be tested.

Noguchi has endeavored to make his method available for the average laboratory worker, and has had the antigen, complement and amboceptor incorporated in filter-paper slips. However, it has been found that the complement-slips deteriorate so rapidly as to be unreliable.

The Wassermann test is considered the more certain and reliable of the two. The reaction is generally more acutely defined, while the Noguchi is so sensitive that one is frequently left in doubt.

The following table of comparative statistics by Fox, based on 230 cases, shows a higher percentage of positive reactions by the Noguchi than by the Wassermann test:

DISEASE	Total of cases	WASSERMANN TEST Positive Reactions	Percentage	NOGUCHI TEST Positive Reactions	Percentage
Primary	7	7	100	7	100
Secondary	37	36	97	37	100
Tertiary	32	23	71	27	84
Hereditary	1	1		1	
Tabes dorsalis	3	3	100	3	100
For Diagnosis	53	21	39	26	49
Nonsyphilitic	23	2		4	

The Specific Character of the Reaction

What can be said as to the specificity of the reaction?

Certain among the nonspecific diseases have given a positive reaction in the hands of many careful observers. The percentage in scarlet-fever has been various, some reporting as high as 50 percent positive. Leprosy gives a fairly high number of positives, according to Noguchi, 70 percent in the tuberous variety. Butler reports a positive reaction in some noma cases; with the blood of patients suffering from framboesia the reaction is reported positive. Levaditi obtained a reaction in the spinal fluids of patients with sleeping-sickness. Some cases of tuberculosis, cancer and diabetes have been reported as reacting positively, but in a majority of these cases the technic was shown to be faulty. Aside from scarlet-fever, yaws and leprosy, this is so infrequent an occurrence that the reaction for syphilis is not impaired.

The possibility of a syphiliti taint in a person, the subject of another disease, must be entertained. Scarlet-fever may be caused by spirochætæ; and Swift advances the theory that the reaction here and in yaws, leprosy and sleeping-sickness is a group reaction excited by the lower forms of animal parasites.

The Cases Where the Reaction Fails

It is a drawback, of course, that a few syphilitic subjects fail to react positively to the test. The test is a biologic process and for some unknown reason all persons do not respond similarly to a given stimulus. Undoubtedly, when our technic improves and a greater experience has come, the cause of these negative findings will be apparent. Wilson thinks this is due to the fact, contrary to the rule, that these sera contain antisheep amboceptors as well as antisyphilitic ones. If the latter are present in only small amount, they may be swamped by the former and a negative reaction result.

In primary syphilis the reaction appears two or three weeks after the appearance of the primary lesion. The demonstration of the spirochætæ pallidæ is readily made at this time either by staining the specimen or with the dark-field illuminator.

It would now seem possible to prove definitely whether or not excision of the primary lesion aborts the diseases. If the diagnosis is made microscopically, the lesions are excised, later serum tests never become positive and no further symptoms develop, then the disease can be considered aborted. However, from our previous studies, this is not at all probable, for the spirochætæ are already far beyond the confines of the primary sore.

Statistics Showing the Value of the Test

In the following instances the Wassermann test was the one employed:

Wassermann collected the results in 1982 cases of syphilis with 1010 controls. All the controls were negative. Of the cases of syphilis which presented some manifest symptoms, 90 percent gave a positive reaction. The latent cases gave 50 percent positive. In 100 cases of locomotor ataxia, Schuetze obtained a positive in 69, either with the blood-serum or spinal fluid, or with both. In 2000 cases of syphilis, Lesser found 69 percent positive in the primary stages (at least three weeks after appearance of sore). In the secondary stage with symptoms, 91 percent positive; without symptoms, 46 percent positive. Of tertiary cases with symptoms, 96 percent positive; without symptoms, 46 percent. Lesser's figures show 100 percent of cases with general paralysis giving a positive result. In tabes, he found that 34 in a total of 61 cases were positive. Of these cases, 45 give a previous history of syphilis. Of the remaining 16 cases, 13 were positive to the Wassermann test. Thus 58 cases, or 95 percent, prove to have had syphilis.

In children with symptoms of hereditary syphilis, practically every case reads positively. The statistics of Cohen, Leber and Fleischer give account of the test in eye lesions and are of great value to the oculist.

The reaction has done much to clear our knowledge of the socalled latent period of the disease. Lesser gives about 50 percent positive in this class of cases and calls attention to the parallel findings found in the autopsy rooms of Berlin. In patients in whom a previous history of syphilis had been given, he found evidences of visceral syphilis in 49 percent. In other words, latency only means that the disease is active beneath the surface, in some viscus or tissue. The laws of Colles and Profeta must be revised, for in a majority of cases, in place of the mother or child being immune, they are simply suffering from the disease in a latent form.

This test is of value to every practician and specialist in medicine, for syphilis is a general disease and may affect any part of the economy. The early diagnosis of nervous diseases, resulting from syphilis, should give more favorable results in the future.

Whitehouse reports five cases of diffuse scleroderma, three of which gave a strong positive Wassermann reaction, one faintly positive and one a negative. The two latter cases had been under specific treatment for one year and for six months respectively. Later cases may prove that syphilis is an etiologic factor in this disease.

Examination of Prostitutes

The report of Dreyer and Meirowsky, who examined one hundred prostitutes of Cologne, shows some startling facts and furnishes material for reflection for physicians and others regulating prostitution in our cities. Of the 100 cases, specific disease could be established by the history in 56, only 1 showing any manifest lesions. Of the remaining 43, who showed no lesions or gave no history, 32 gave a positive reaction. Of the 56 known infected, 45 reacted positively. In other words, 75 percent had syphilis, and 85 percent were, or had been, infected. Excepting 3 cases, the non-syphilitics had registered as prostitutes less than a year back. This goes to prove that *nearly every prostitute becomes syphilitic.*

Of what value is the test in the control of treatment? Does it possess prognostic value?

It is still too early to speak with authority, but the statistics already collected point to its great value in this respect. In the early studies, it was noted that the untreated cases gave a higher percentage of positives than those that had been treated. Bruck and Stern noted 81 percent positive in 173 untreated cases, and only 28 percent positive in 178 treated cases. The figures of Blaschke and Boas closely follow those of Bruck and Stern.

Boas points out that the disappearance of the reaction does not necessarily run parallel with the disappearance of the symptoms. The reaction may disappear suddenly, but usually is gradually influenced as treatment is continued, until it finally disappears.

Laws Helpful in Treatment

Citron has formulated the following laws on the relation between treatment and strength of reaction:

1. "The longer the syphilitic virus has worked in the body, the oftener it has caused relapses, the more constant and stronger is the antibody-content of the serum."

2. "The earlier mercurial treatment is begun, the longer it is continued, the more often it is repeated, and the more efficient the manner of application, the lower is the antibody-content."

The earlier treatment is commenced, the more probably a negative result will be obtained after treatment. Neisser's cases illustrate this. A negative result was obtained in 75 percent of the cases where treatment was commenced as soon as possible after the primary sore appeared; whereas in another series, in which treatment was delayed for six months, only 33 percent were negative.

The iodides usually exercise little influence on the reaction, but Swift records a few cases under treatment with the iodides alone, in which it disappeared. Lesser tested atoxyl, but he never witnessed any change in the reaction. In experimenting with the several mercurial salts and the different methods of administration, the results largely corroborate our clinical experience.

The most reliable preparations are found to be calomel, *mercury* in the form of the salicylate, succinimide or bichloride. The

reaction is influenced most rapidly by injections and inunctions. Hoehne records 83 cases receiving seven injections, of 1 1-2 grains each dose, of mercury salicylate, which gave 66 percent negative and 16 percent slightly positive. In Swift's records, more of the latent cases gave a strong positive reaction after receiving the usual dispensary protoiodide treatment than from any other mercurial.

These findings would seem to emphasize strongly the importance of giving in every specific case at least three or four courses of inunctions or injections during the first year of treatment, and a lesser number for one or two years after that, with a course of treatment by the mouth during the intervals. No specific case should be discharged until a negative finding is shown. Or if in a given case, after prolonged treatment, repeated tests fail to give a negative reaction, then prudence demands continuation of the treatment for a safe period to make a cure reasonably sure. The future health and happiness of our patients and their posterity demand this.

An Apparent Cure for Pellagra

By E. H. BOWLING, M. D., Durham, North Carolina

EDITORIAL NOTE.—Ever since it was first announced, several years ago, that pellagra prevailed in this country, it seems to have been taken for granted that the disease was incurable, at least in most cases. But is it incurable? There is a respectable minority of physicians who refuse to concede that it is, and some of these men, by applying the "clean-out and clean-up" principle, are getting results that warrant a much more hopeful outlook. Dr. Bowling is one of these men.

FIVE years ago I treated my first case of pellagra, but at that time I and several other physicians failed to diagnose it as such, for we simply did not know what the trouble was and frankly so confessed to ourselves. Of course, to the family we gave some name to the disease, although I forget what I wrote in the death certificate. Last year there were a few isolated cases in our city, the patients, so far as I know, all recovering, nor did the disease make much of an impression either on the profession or the laity. In the spring of the present year we almost had an epidemic, and I had to sign three death certificates for pellagra in one week. The situation at that time was truly alarming and the people were almost panic-stricken. The doctors could give no encouragement, and I am free to confess that I myself felt absolutely helpless when called upon to treat a pellagra patient.

The First Recognized Case

About this time I was called to see a man with rheumatism, and while at his house his wife showed me her hands and arms and asked if I thought she had had pellagra. The hands looked characteristic, so I made inquiry as to the presence of sore mouth, diarrhea, dermatitis, mental symptoms, and so on. The clinical history made the diagnosis positive and I so told her, and upon asking her who cured her, she replied: "You doctors were losing all your cases, so I discharged mine and began treating myself, and you see the results." The only treatment, she told me, had been cream of tartar and sulphur, equal parts, a teaspoonful in water three times a day.

Immediately my thoughts reverted to intestinal antisepsis and I felt chagrined for so utterly overlooking the "clean-out, clean-up and keep-clean" dogma that Waugh and Abbott had tried so persistently to hammer into this thick cranium of mine.

My next patient, you can rest assured, got the cleaning out and the old reliable stand-by in time of trouble, the zinc sulphocarbolate in heroic doses; but while there was some improvement, I had to confess that for the first time in my experience I felt that my old friend had deserted me.

While casting about for the next-best thing to do, I was called to see a woman whose arms had the characteristic sunburn-eruption, or rather rash, of which she thought nothing though, but wanted me to "cure that obstinate sore mouth" that had troubled her for three weeks and would not get well after all she had tried. I diagnosed the case as pellagra, which it evidently was.

I ordered a tablespoonful of magnesium sulphate, gave her a prescription for 4 ounces of chlorine water, a teaspoonful to be taken in water every two hours, and went my way, expecting to be called again in a few days, only to see another pellagra patient go down and down to the inevitable grave. I waited ten days, but that call did not come; so I went to investigate. The woman met me at the door and, laughing, said: "Doctor, you tried to scare me to death the other day. That was no pellagra, at all, it was only a sore mouth, and that medicine cured me entirely." And well she was, with no return thus far.

I thought that possibly I might be mistaken in my diagnosis, so I immediately visited another patient who undoubtedly did have the affection, and put her on the same treatment. She also was quickly relieved, and so far as I can judge, she is entirely well.

Still Another Case—Also Apparently Cured

I had another patient, an old man 65 years old, this being his fourth attack. His hands, the back of his neck, and the area under his eyes were awful to look upon; his mouth was in a fearful condition; his mind was badly affected; and he was so weak he could hardly walk. Judging by the other cases I had seen die, the man had not more than a month to live, at the outside. I carried him to the Watts Hospital and, at the suggestion of Dr. Joseph Graham, who treated the case with me, we gave him the regulation cleaning out with one ounce of castor oil, administered the chlorine water every two hours, and gave a hypodermoclysis of one quart of normal salt solution twice a day. During his treatment of a little more than two weeks we had to clean him out several times with castor oil. However, in three weeks the old man went home, seemingly well, while the next week after that he took a trip of twenty-two miles out into the country, in a wagon, over the rough roads and, aside from being tired, felt none the worse for the shaking-up. I saw him today, and he was feeling well, and apparently is cured.

My next case was that of an old lady who was hardly able to stand the trip of eighteen miles on the train to get to the hospital and was utterly exhausted when she arrived. This was as hopeless looking a case as I ever saw, but after three weeks of the foregoing treatment she returned home, apparently well, and she is now attending to her household duties.

Are They Cured of the Disease?

I have treated six pellagra patients since then in the same manner and with the same happy results. Are they cured? They seem to be. Will the trouble reappear next year? I can not answer—but supposing it does. I hope to see those so attacked much earlier than this year; then, will not the same treatment have the same results? At any rate, so far as it is possible to see and judging from other cases where I had seen the victims die, these people whom I benefited would have died this year. If they do die next year, is it not giving them one more year of life? Is not this worth something—a great deal?

All these patients I instruct to keep their bowels in good order, never allowing them to become constipated. In addition, I put them on the following treatment:

Potassium nitrate .....dr. 1
Ferrous sulphate .....dr. 1
Nitrohydrochloric acid, q. s. ad oz. 1

Directions: Take 5 drops in plenty of water (through a glass tube) after each meal.

I have them all taking that mixture at the present time.

I gave no arsenic. I tried that and found it wanting. The patients I buried went to their graves full of arsenic. The hypodermoclysis is the idea of Dr. Graham, and it is a good one. I use it in every pellagra case where I can, but when the patient absolutely refuses to let me use it longer, as some of them do, then I resort to enteroclysis, that is, use the normal salt solution by the rectum, only allowing the solution to

enter very slowly, almost drop by drop. This, however, has not been as satisfactory, in my hands, as the hypodermoclysis.

Things to Remember

Dr. Graham doubtless will, at an early date, give to the journals an exhaustive report of his experience with the hypodermoclysis method. I have only touched the subject superficially, but I want to impress on the readers these ideas:

1. Pellagra is an autoinfection starting from the small intestine. Clean out, clean up, antisepticize.

2. Give chlorine water. This any country doctor can make from potassium chlorate and hydrochloric acid. I used to make mine when I was eighteen miles from the nearest drugstore, and the formula can be found in the Dispensatory and various formularies under the heading of "chlorine water," or "euchlorine." This remedy, after all, is the best, and I believe the only harmless antiseptic for the blood current at command. Use it in your next case of diphtheria, and very likely you will not need any antitoxin.

3. Put on your thinking caps and get a hustle on yourselves. We have this problem to face. We have pellagra here and it is here to stay, and it is up to us, the medical fraternity, to find a remedy.

I do not believe the treatment I have outlined is a sovereign remedy, but it will do good; it has apparently cured, temporarily at least, my patients until I have about cured all. I have two cases in the hospital now, both improving, but the "family" has thousands of cases.

Now, try this treatment, then add to it, as you surely can, and eventually we shall discover a method that will cure, and cure permanently. Then, when this comes to pass, if I can feel that I have contributed my little mite, if it was nothing more than to get a move on the old fossils that "can sing and won't," then I shall feel that I am amply repaid for the small effort that this hurried scribbling has cost me, even if it was done after a rushing day's work; and shall also feel that I am not owing you very much of an apology for taking up as much space in *our* household necessity and consuming so much of your valuable time.

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[In a later letter Dr. Bowling writes: "I have a case now in the hospital, an old negro woman, who has the worst attack I ever saw. I am treating her with saline laxative (effervescent magnesium sulphate) and intestinal antiseptics—the compound sulphocarbolates. I am giving a tablespoonful of the saline laxative twice a day, and the way I am cleaning her out is a caution. She has involuntary actions and the stools are so offensive that carbolic acid will not kill the stench. At first I gave one intestinal-antiseptic tablet every three hours; now I am giving one every two hours. I intend to have a picture made of this patient and I shall send it to you. It is the only case of pellagra I now have where there are the typical lesions."

We shall want to hear of the outcome in this case, the picture of which has *not* come to hand as yet. It is perhaps presumptuous to prophesy that the doctor will cure it; but considering the results which he has already obtained, at least we have the right to *hope* that he will do so. Dr. Bowling has struck the right principle we are convinced—the one upon which we have insisted so much—that attention to the alimentary tract is of fundamental importance in pellagra, as in most other diseases. The fact that this *is* the right principle is further borne out by the experience of Dr. Torbett, of Marlin, Texas, reported elsewhere in this issue; he, also, has apparently cured cases of pellagra by thorough cleansing and antisepsis of the bowel. Though the choice of remedies may not be vital we believe that eventually our friends will turn to the laxative salines and the sulphocarbolates. In this connection we wish that someone would try out copper sulphocarbolate which apparently has cured at least one case. It seems indicated. Copper has a very high toxicity for low forms of life.—ED.]

The Diagnosis and Treatment of Pellagra

Presenting a Method of Treatment Found Successful in Some Cases

By J. W. TORBETT, B. S., M. D., Marlin, Texas

EDITORIAL NOTE.—Like Dr. Bowling, whose article upon pellagra also appears in this number, Dr. Torbett has been very successful in the treatment of this strange and usually intractable disease. Both articles should be read together. Dr. Torbett, as the head of a large and finely equipped sanitarium, has had peculiarly favorable opportunities for careful clinical study.

SO many articles have been written upon the subject of pellagra within the last two years that it would be a useless repetition to enumerate all the theories, symptoms and treatments advised. I shall give some of the symptoms not usually mentioned by others and which I have observed in the cases I have treated myself during the past four years, and relate in more detail the treatment employed, which seems to have done a great deal of good in all cases where the patients could take it persistently.

I have seen in all about 19 cases, but only 12 of the sufferers were treated, because the others were so far advanced when first seen, with melancholia and other serious symptoms, that they would not take continuous treatment; in every case they returned home within a week and died soon after.

My first cases were seen and treated before I knew what the disease was; but no one who has ever seen a typical case of pellagra can ever forget it. I diagnosed my cases by name first about two and a half years ago, soon after I read Babcock's article. Before that time I called them intestinal autotoxemia due to the absorption of some *unknown toxins* from the alimentary tract, those toxins being deposited around the sympathetic and spinal nerves, causing paresis, neuritis and symmetrical dermatitis, and this I still think is the real pathogenesis of the disease. Two of the patients treated at that time by the oil method mentioned in this article are symptomatically well, though one of them, a woman, was affected seriously with religious delusions. I sent her home to die after two weeks' treatment, but learned within the last five months that she took the petroleum-oil emulsion for one year, continuously, and has been well ever since.

The Early Symptoms of Pellagra

Most of my cases when first seen have the classic dermatitis, which consists of a symmetrical, dark-red or brown inflammation of the skin, not unlike a tanned sunburn, at times infected and with pus under the skin. After several days the superficial area of skin peels off and another layer, more normal, is found to have formed beneath it. This dermatitis is usually confined to the hands and feet or to the face—especially the parts exposed to the sunlight. The lesion may "burn" but rarely itches. This eruption usually appears when the diarrhea begins, and may not appear until two or three years after the nervous symptoms have been present. The skin of the nose and face may be rough, as if sand were in the skin.

One of my patients developed very early a peculiar cyclic insanity, with the delusion that God had cleansed him so that he would never have to take another bath. This delusion would remain for a few hours and then he would be mentally normal again for a while. He did not have the shining, glazed red tongue and diarrhea until some weeks later, this symptom showing the true nature of the disease just before his death.

The first symptom in almost every case was some uneasiness, nervousness and insomnia, without any apparent cause. One of my cases, however, had no insomnia, but had the common "dreads" and other symp-

toms of neurasthenia until the diarrhea and dermatitis developed.

Some Peculiar Symptoms

One symptom which I have always noticed and which the Italian authorities mention, but which is not noted by many in the United States, is the feeling of numbness and paresthesia in the hands and feet, as a result of which they can endure the long static sparks. They are the only *nervous* patients I have ever seen who would *beg* for them, and they seem to be greatly benefited thereby. Many of these patients have peculiar drawing sensations, as if some one were pulling them "one-sided," or putting traction on one set of muscles.

I have never seen patients who had the dread for water mentioned by the Italians, with the exception of one very intelligent lady who could not wash her feet in water without having pains for hours, so severe as to prevent sleep. Her feet felt very dead and numb, yet she gained 23 pounds within three months, though she has not retained it all, I saw her today and she is doing very well. She still has no free hydrochloric acid in the stomach and vomits occasionally. She had had some stomach trouble for years, however, before this attack. There was a slight return of the diarrhea this summer, but it was soon controlled by the small doses of castor oil—one teaspoonful at bedtime, as last year.

The full pellagra syndrome is nervousness, insomnia, drawing sensations, diarrhea with very offensive stools, stomatitis, salivation with very red, glazed tongue, symmetrical atrophic dermatitis, melancholia, mental delusions and finally insanity. I do not think we should wait for all these symptoms to make a diagnosis, but cases with nervous symptoms, insomnia, diarrhea, salivation, red, glazed tongue should be called pellagra and treated as such, whether the skin lesions are present or absent.

The Differential Diagnosis

There is one other disease, of which I have seen three cases, that resembles pellagra very much. It is called "sprue," or "psilosis." This disease is characterized by a severe diarrhea, usually worse each morning, a stomatitis with *erosions and aphthous patches*, increasing emaciation and ulceration of the small intestines. The stools are more liquid than in pellagra, grayish in color and not so offensive. The drawing sensations, numbness, dermatitis and insanity are never present, so far as I can learn. It is usually confined to the Orient, but Dr. Harris, of Alabama, who was the first to report a case of pellagra in the United Ststes, having reported a case in 1902, has reported several cases of sprue. It may however be pellagra in which nature reacts strongly enough to throw off the toxin or cause of the disease in the diarrhea so completely that none is deposited within the spinal cord or nervous system, as in the typical cases of pellagra.

The oil treatment is just as good for one as the other, hence the diagnosis is not so necessary. Both are frequently fatal.

There is another disease described by Stelwagon, Crocker and others, known as "acrodynia," which several times has been epidemic. It is also called "epidemic erythema." The symptoms are gastrointestinal irritation and diarrhea, conjunctivitis, edema of the face, formication, pricking pains of the hands and feet, hyperesthesia and later anesthesia; a bullous and erythematous eruption breaks out on the hands and feet and sometimes the limbs and trunk. The patient usually recovers within three or four weeks.

Treatment of Pellagra

Every pellagra patient I have had who could take the petroleum emulsion continuously for at least three weeks has greatly improved. Two patients could not take it well and improved as well on teaspoonful doses of castor oil at bedtime. I have never tried olive oil. I used the petroleum with hypophosphite of lime and soda as made by S. & D. and P. D. & Co., but the preparation of the National Formulary is perhaps as good, though not quite so strong.

Two of my patients had used much alcohol and while they improved very rapidly under the treatment, so far as the bowel and nervous symptoms were concerned, they soon relapsed and died. The poison in pellagra and alcohol have a very similar effect upon

the brain and nervous system, hence strychnine instead of whisky should be always used as a stimulant if one is needed.

As intestinal antiseptics and astringents I tried many remedies on my first cases, but since then have relied on a combination of zinc sulphocarbolate, dr. 1; bismuth subnitrate, drs. 2; aqueous extract hydrastis and tincture ginger, of each drs. 2, and elixir lactated pepsin enough to make ozs. 2. One teaspoonful of this, in water, is to be taken every two or three hours, as needed to hold the bowels to three or four movements daily. If the discharges are checked more than that the nervous and mental symptoms always get worse.

I have never tried the effervescent magnesium sulphate, but my fine results in recent gonorrheal arthritis and all swollen inflammatory conditions of mucous membranes, when this salt is applied locally, would indicate that very small doses, comparable to the small doses of castor oil, might do as well in preventing fermentation and helping elimination in such cases.

I gave the wave current and static sparks at first with the petroleum emulsion and sulphocarbolates, but some of my recent cases have done about as well without any electricity. One patient who was very ill, gradually going down for two years, has gained 20 pounds within the past four months and from a bedridden condition has improved so much that she is now doing her own housework. Several other patients have gained from 10 to 30 pounds and some have remained very well from twevle to eighteen months, aside from the two apparently well for three years.

I think the oil treatment simply prevents fermentation, increases elimination and thereby improves nutrition. I should be glad to have others try these remedies and report results.

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[This is another testimonial to the value of intestinal antisepsis in this malady. The resemblance to sprue was notable in every case the writer has examined. That reported by Dr. Waugh last summer is said to have recovered under copper sulphocarbolate. This remedy others should try. Other recoveries have been ascribed to removal to high altitudes. Transfusion is not succeeding as first claimed, and the newspapers say that five patients have died under this treatment in one of the public institutions of Illinois.—ED.]

LET us be bold in hypothesis. One is never sufficiently so. But let us also be very cautious in affirmation. For that which constitutes a true man of science is that he joins to extreme boldness in hypothesis extreme caution in conclusion. Especially, do not allow your patience to tire. Nature is rebellious, and does not allow the first comer all at once to tear from her her secrets. One never succeeds in learning these terrible secrets in fragments, and at the cost of long and laborious efforts.

—Charles Richet

The Radical Cure of Hydrocele

A Simple Operation That Can be Performed Under Local Anesthesia

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois
Professor of Principles of Surgery and Clinical Surgery, Bennett Medical College; Consulting Surgeon, Mary Thompson Hospital for Women; Attending Surgeon, Jefferson Park Hospital.

EDITORIAL NOTE.—This is the third article in Dr. Breakstone's series, which deals with "ambulatory surgery", meaning the kind of surgery that the physician can do in his own office, under local anesthesia. This series is attracting much favorable attention and comment. We are happy to be able to promise its continuance.

VARIOUS methods have been proposed for the radical cure of hydrocele, and these may be divided into two classes, the operative and the nonoperative.

The nonoperative measures consist in the evacuation of the tunica vaginalis testis with a trocar and refilling the cavity with some sclerogenic, stimulating or alterative fluid, such as 5-percent carbolic acid, weak solution of zinc chloride, tincture of iodine, etc.

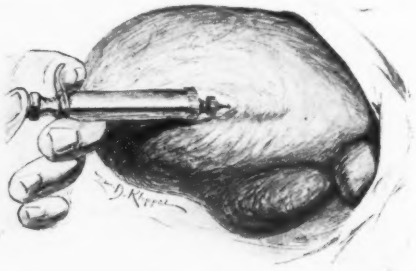

Fig. 1. Anesthetization of the Line of Incision

All of these methods are unscientific and do not insure a permanent cure. They are all dangerous, inasmuch as it is impossible to determine how far the chemical used in the fluid will work, while in case the tunica vaginalis is patulous, as in congenital hernia or in hydrocele of the cord, some of the fluid may enter the general peritoneal cavity, which of course is a very serious thing. I merely mention these methods because they are unscientific, do not give permanent results, and therefore should be condemned. However, they are the methods of the quacks, and thus they can advertise the "cure" of hydrocele without the use of the knife. I have treated many cases of orchitis which followed these injection-treatments.

Of the operative procedures, there are three well-established methods, as explained below.

Volkmann's Operation

This operation is performed as follows: Cut through the skin, superficial fascia and dartos, on the anterior aspect of the scrotum, over the hydrocele, then make a free incision through the tunica vaginalis and evacuate the sac thus opened. Then sew the cut edges of the sac to the cut ends of the skin and superficial fascia. The remaining cavity is packed well with iodoform-gauze and

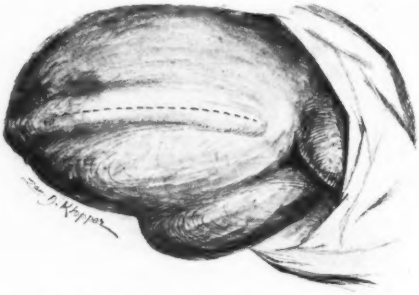

Fig. 2. The Line of Incision, Now Rendered Anesthetic

allowed to heal by granulation, which generally takes from six to twelve weeks, although after ten days the patient may follow his usual occupation.

This operation, which was the operation of choice of the late Prof. Nicholas Senn,

is usually performed under general anesthesia. There have been quite a number of recurrences following this operation, which are explained in this way: The remaining cavity having many recesses, we do not reach all of them with our packing, so that portions of the secreting diseased membrane are not destroyed in the process of granulation, with the result that these remnants will continue to exude fluid, and thus create

Fig. 3. Exposure of Tunica Vaginalis and Emptying of Contents

a fresh cavity. This operation, therefore, can be described as *obliteration of the sac.*

Von Bergmann's Operation

Von Bergmann's operation is really the most radical of all, as it consists of complete excision of the sac, which, of course, requires a dissection into the inguinal ring and cutting off the sac and ligating it at that point. Inasmuch as the entire sac is removed, the wound is closed up without drainage. There can be no recurrence after this operation, but it requires extensive dissection and it is hardly advisable to perform the same under local anesthesia.

Doyen's Operation

About ten years ago a French surgeon, Doyen, devised an operation according to which the sac, after opening after the manner of Volkmann is everted to cover the testicle, and the wound closed up without drainage. The theory of this operation was that if the two secreting surfaces of the tunica vaginalis were not in contact, they would not exude fluid, because after the operation the secreting surface, was in contact with the dartos, and it was, therefore, assumed that adhesions would form between the latter and the everted sac, thus effecting a cure.

However, very many recurrences followed this operation, and, I believe, it is now abandoned by most surgeons. As long as there is a secreting surface, irrespective of what tissue it is in contact with, it will continue to secrete and thus prevent rather than favor adhesions; whence it is readily seen why recurrences were common. For this reason Doyen's procedure can no longer be considered a radical cure of hydrocele.

To recapitulate, we may say that Volkmann's operation consists in the obliteration, Von Bergmann's in the excision, and Doyen's in the inversion of the diseased tunica vaginalis constituting the hydrocele sac.

The author here wishes to describe a modification of the first two operations named, and it may therefore be called,

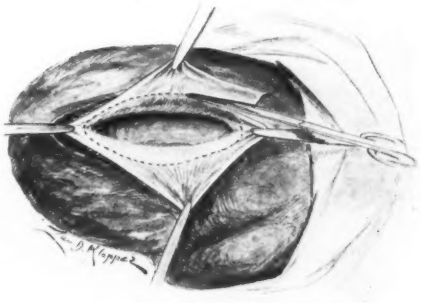

Fig. 4. Trimming off the Edges of the Tunica

perhaps, a modified Volkmann-von Bergmann operation.

The advantages of this operation are that it is a radial operation, may be done under local anesthesia, that the patient loses no time from his occupation, that it is painless, and is the most satisfactory ambulatory operation performed under local anesthesia. In the last ten years the author has met with no complications whatsoever and no recurrences.

Volkmann's operation will not result in recurrences if one is careful in packing every recess of the secreting cavity with iodoform

gauze. But it requires from six to twelve weeks for the cavity to granulate completely. In the modified Volkmann-von Bergmann operation, on the other hand, the remaining cavity being more shallow, you are less liable to overlook any recesses to be packed, and it, therefore, requires a shorter time for recovery, that is, only from two to four weeks; with the additional advantage that the patient follows his usual occupation without interruption. This operation is performed as follows:

Modified Volkmann-von Bergmann Operation

Having asepticized the field of operation, the line of the proposed incision is cocainized, as shown in Figure 1. The line of incision, of course, should be on the anterior aspect of the scrotum, about one inch to one and one-half inches from the median raphé and running parallel with it for from two to four and one-half inches, depending, of course, on the size of the hydrocele, as shown in Figure 2. The patient is in the recumbent posture, and when cocainization is complete, there is an area of edema along the line of the proposed incision. (Fig. 2.) While the cocaine is taking effect, the instruments, consisting of a scalpel, several artery-forceps, tissue-forceps, scissors, needles, and catgut, are prepared.

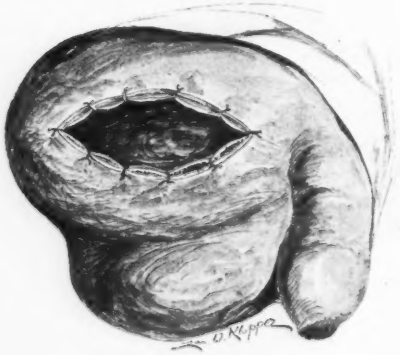

Fig. 5. The Tunica Vaginalis is Sewed to the Skin

The incision is then made, first through the skin, superficial fascia, and dartos, and then a nick is made into the shining white tunica vaginalis and the contents allowed to escape, as shown in Figure 3. The tunica vaginalis is then incised to the lower angle of the wound, the cut edges are brought out through the wound, as in Volkmann's operation. Then as much as convenient of the sac is removed, as shown in Figure 4. This latter is the von Bergmann part of the operation.

Now, after a sufficient amount of the tunica vaginalis has been removed, the remaining portion is sewed to the skin (Fig. 5), leaving a small cavity to heal by granulation. The remaining cavity is then packed with iodoform gauze (Fig. 6), which is changed about twice a week. The field is then covered with sterile dry gauze and a combination pad and a short suspensory is adjusted. The patient then is ready to go to his work or to his home.

Fig. 6. The Cavity Packed with Iodoform Gauze

This operation can easily be done in any physician's office or at the patient's home, and it is scientific as well as radical. There are many patients with hydrocele who go to quacks; indeed, hydrocele seems to be a specialty of the advertising quack. While these patients are victims of unscientific and harmful treatment, business men and others suffering from hydrocele, it seems, would rather take that risk than lose time from their occupations.

However, my procedure, as here described, vouchsafes a radical cure of hydrocele without causing the patient to suffer pain or to lose time from his occupation.

Acute Anterior Poliomyelitis*

The Report of a Case, and the Suggestion of a Remedy

By SMITH J. TOWNSEND, M. D., Gilmore, Iowa

IN view of the increasing prevalence in Iowa of acute anterior poliomyelitis, commonly known as infantile paralysis, and the unsettled state of our knowledge concerning this affection, a few thoughts gathered from the current medical literature of this subject, together with a partial report of a case that developed in Pocahontas County, may be of more or less general interest.

Dr. Buzzard of London defines acute anterior poliomyelitis as an acute, probably specific, febrile illness affecting children and young adults, characterized anatomically by a confluent or discrete inflammation of the gray matter of the spinal cord and brain-stem, with resulting destruction of the nerve-cells and consequent degeneration of their axis-cylinder processes and atrophy of muscles, usually those of the limbs, but occasionally also those of the head and trunk; a paralysis which reaches its maximum in a few hours and tends toward recovery in some parts and to the production of permanent disabilities and deformities in others.

Some writers think that infantile paralysis is infectious but not contagious. (Throckmorton, in the September number of *The Iowa Medical Journal*); others consider it both infectious and contagious (McClanahan, in *The Journal of the American Medical Association*, Oct. 1). The latter view would seem to be substantiated by the experience of Dr. C. A. Anderson of Stromberg, Nebraska. This town is in Polk County, which has a population of 12,000.

A Nebraska Epidemic

In May of 1909 a case of anterior poliomyelitis was imported into that county, and by July 4 thirty cases had occurred in and about Stromberg. Against the advice of the physicians, the people had a public Fourth-of-July celebration, which was well attended, and in less than thirty days following they had one hundred and fifteen cases in Stromberg and vicinity. On July 21 the Nebraska State Board of Health authorized quarantine and within twelve days they had the epidemic well under control, only fifteen scattered cases occurring after that date.

While the contagiousness of this malady has not yet been proved in the Mason City epidemic, the first case seemed to be a center of infection, inasmuch as nine or ten cases developed within a block or two of this case; and finally fifty-three cases that showed paralysis have been reported in and about Mason City.

The data collected in Scandinavia indicate that the contagion can be carried by intermediate persons from the stricken to the healthy, and from patients not frankly paralyzed but suffering from slight or so-called abortive attacks; the period of incubation being from five to thirty-three days and the average about ten days.

The Specific Microorganism

The discovery, almost simultaneously, by Drs. S. Flexner and Lewis of the United States, and Drs. Landsteiner and Levadite of France, that the infectious agent is a minute microorganism, as also the successful inoculation of monkeys with portions of the spinal cord of infected human beings by Dr. Flexner in September, 1909, leads us to hope that we may soon have a more complete knowledge of the etiology.

Dr. Mettler says, the symptoms of acute anterior poliomyelitis are marvelously definite and uniform. The clinical picture develops and progresses through stages that are singularly distinct and logical, a typical case, except in the very earliest onset of the disease, presenting no great difficulties in diagnosis.

Remembering the pathology, one can readily understand why every case should show

*Read before the Pocahontas County (Iowa) Medical Society, Oct. 14, 1910

progressively the following four symptomatic stages, namely: (1) infectious fever; (2) widespread sudden, flaccid paralysis; (3) recession of the widespread paralysis, with permanent paralysis and atrophy in certain individual muscles; (4) deformities resulting from wasting of muscles and contractures.

The Early Symptoms

I will discuss briefly the symptoms of the first stage, as that is the one that we, as general practicians, are more apt to meet.

The beginning of the disease is usually abrupt and unexpected. A child after a happy day with its playmates, romping and playing outdoors, comes in and complains of extreme weariness and distress; its head begins to ache; it is nauseated and may vomit; it is listless and clings to its mother's arms; perhaps it has a violent chill; the face becomes hot, dry, and flushed; it may soon become stuporous and even slightly delirious; there may be general convulsions; the child refuses all food; and in every way it shows that it is extremely ill and feverish, the temperature being anywhere from 102° to 104° F. In the morning the child wakens with perhaps a slight diminution of the febrile symptoms but completely paralyzed in the legs or arms.

The question that interests us is, What shall we do?

I am of opinion that it may help us in selecting a remedy that will benefit our patients if we will consider the experiments of Crowe with urotropin (official name, hexamethylenamin; also known as formin, etc.), as published two years ago in *The Johns Hopkins Hospital Bulletin*, which demonstrated the constant early appearance of urotropin in the cerebrospinal fluid even after the ingestion of relatively small doses by the mouth. Dr. Crowe also showed the antiseptic action of urotropin upon bacteria when introduced subdurally.

The Use of Urotropin, With a Case-Report

Acting upon this suggestion, Dr. Robert Preble of Chicago administered urotropin in two cases of infantile paralysis shortly after the onset of the paralytic phenomenon. The paralysis did not extend further in either instance and both cases made good recoveries.

Hence, in addition to our former treatment with laxatives, to unload the bowel, thus removing part of the toxic poison from the system, and with salicylates, to quiet pain, reduce fever and combat toxemia, we also have urotropin, a proved antiseptic for the cerebrospinal fluid, which should give us much assistance while we wait for the discovery of a specific serum.

On September 16 I was called into the country to see F. K., a boy aged 11 years. His temperature, I found, was 102° F., and the patient complained of aching in legs and arms, but I did not find any special cause for illness unless it might be some infectious fever. I gave laxatives, to clean the bowels, and salicylates, to quiet pain and reduce fever.

Then the family informed me that the hired man, R. T., aged 20 years, was not well and called him downstairs to consult me. This young man, a member of the state militia, had just returned from a ten-days' camp, with the other boys, in Wisconsin (August 10 to 20), where he may have been exposed to infantile paralysis. He thought the water there was impure. His temperature was normal. He had complained of considerable aching and itching of legs and arms for one week past. I prescribed for a cold, which I thought might explain his symptoms. That afternoon he came to town, two miles, and did not seem seriously ill. The next morning, September 17, he was worse and my colleague, Dr. Herrick, being his friend, was called.

He then complained of severe pain in legs and arms, with headache. That evening his temperature reached 102.5° F., and he lost the use of his legs. The next day his parents came and removed him to their home in Webster City, Iowa. Here he suffered intensely for some days, with resulting paralysis in both legs and arms. I have been unable to get a report of his treatment, but learn that he is now improving somewhat, although still paralyzed.

The day after he was removed to his home I was again sent for to see the boy F. K., mentioned before. I found his temperature reduced but general soreness of legs and arms, and suspected that he, too, was developing infantile paralysis. I gave

him urotropin in 5-grain doses four times daily. He took this treatment for about one week and his symptoms gradually disappeared. He did not show the paralytic phenomenon, but his other symptoms were so much like those of the case reported that I, knowing he had been exposed, felt it was the same infection in both cases. I am of the opinion that the agent which checked the progress of the dreaded paralysis was the urotropin.

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[Acute anterior poliomyelitis is very prevalent in the country—alarmingly prevalent. The writer heard of a case on his own street only a few days ago; yesterday, one of our staff reported another case, near us, and already many of our subscribers have written, asking for advice and help. Not only are there many cases of the disease, but in addition to the large number of permanent paralyses following it, there are many deaths. Naturally every doctor is reaching out for every possible crumb of comfort and helpfulness.

Dr. Townsend's suggestion, that urotropin be used, will undoubtedly be put to the test by many of our readers. The method seems to have a logical basis. Urotropin, as our readers of course know, has many other names, urotropin being the superior proprietary first introduced. The official name is hexamethylenamin. It probably decomposes within the body with the formation of formaldehyde, a very powerful antiseptic, and this is eliminated by the urine. It is often combined, to good advantage, with the lithium salts, the benzoates and arbutin.

The importance of securing and maintaining a clean and as nearly as possible aseptic alimentary canal is as important in this disease as in other of the infectious ailments. The preliminary calomel-saline purge and the intestinal antiseptics will immediately suggest themselves to every thoughtful physician. Then the tendency to congestion of the spinal cord should be arrested if possible—and at once. For this purpose some powerful spinal sedative seems indicated. We learn that one of our Iowa friends, who has been called upon to treat a number of cases, has had excellent success with gelsemium, but he pushes this to the full physiological effect, which is shown by drooping of the eyelids—in some cases ptosis. Instead of the fluid preparations of gelsemium, which are notoriously unreliable, we suggest the use of gelseminine. These two suggestions seem worthy of trial. Read the first "Miscellaneous" article.—ED.]

The Alkaloids of the Atropine Group

By E. ROBERT TISSOT, M. D., Chaux de Fonds, Switzerland

EDITORIAL NOTE.—This is a continuation of Dr. Tissot's interesting study on the alkaloids of the atropine group, the first part of which appeared in "Clinical Medicine" for July, page 737. This sequel should have appeared earlier but was unavoidably crowded out. We have in hand another paper by Dr. Tissot upon this alkaloidal group, which will appear in an early number.

SECONDARY UNFAVORABLE EFFECTS OF BELLADONNA

IN this paper it will be shown how very necessary it is to employ only atropine, the active principle, rather than the galenic preparations of the plant, and to administer that substance only according to dosimetric rules.

Disturbances in the Skin.—Redness with tumefaction, which may simulate erysipelas, has been reported to have appeared as early as twenty minutes after the absorption of atropine. This may persist for as long as three or four days, and it has been mistaken for erythema due to the sun's rays. At other times there has appeared an urticaria showing a tendency to induration. Vesicular eruptions are not infrequent and may cover the entire body. Such phenomena have been reported after a single dose of 1-200 of a grain. Fortunately they are not very dangerous and, by demonstrating the

powerful character of this agent, they serve to stimulate us to exercise extra caution.

Digestive Disturbances.—The prolonged administration of belladonna produces dryness of the mouth, anorexia, vomiting, diarrhea and colic, all due to a perversion of the gastric secretions.

Genitourinary Disturbances.—One single weak dose of the drug has given rise to albuminuria accompanied by delirium. Belladonna may pass over from the mother to the fetus. Thus a woman in labor took 1-30 of a grain of atropine. The labor-pains ceased and it became necessary to apply the forceps, and the child, when delivered, was asphyctic and its pupils were dilated to the extreme.

Disturbances of the Circulation.—Palpitation is far from being an infrequent sequel of the ingestion of belladonna. In the same manner epistaxis and other forms of hemorrhage may result.

Respiratory Disturbances.—Cases have been observed in which the respiration became labored, stertorous or wheezing, the patient experiencing at the same time a stifling sensation.

Disturbances of the Nervous and Sensory Centers

As affecting the eye, atropine may, upon prolonged use, irritate the conjunctiva; it may also produce blepharoconjunctivitis with irritation, itching, lacrimation, and eczema of the eyelids and surrounding skin. At other times objects looked at have appeared to the individual as though surrounded by a fog or showing the colors of the rainbow with their borders indistinct. In dim light the patient may notice a trembling shimmer and peculiar phosphorescent shapes. In those who are very susceptible, prolonged use of atropine may produce an attack of glaucoma.

Headache appears especially after meals. Vertigo, insomnia, distress of mind are not rare. Instillation of atropine into the eye may produce psychic excitement or an actual toxic mania. The patients declare that they are the "tree of life" or the "blessing of God." (Lewin, "Nebenwirkungen.") Still other patients bite, grind their teeth, and have attacks of mania or persecution. Others laugh, applaud, chatter, and then fall into a deep sleep.

The motor centers may also be affected, and this may lead to disturbances in walking and to motor incoordination. There have been observed paraplegia, trembling, convulsions, spasms, trismus, disturbances of speech.

All these facts here enumerated, which are terrifying enough in themselves, should, however, not restrain us from employing this drug, although they do teach us that it must be administered with prudence; and prudence, in pharmacotherapy, means dosimetry—and only that.

Acute Belladonna-Poisoning and Its Treatment

The clinical picture of acute belladonna-poisoning is absolutely typical, because of the well-established action of atropine, its active principle, on certain organs; for here atropine excites, there it paralyzes.

Atropine paralyzes the peripheral extremities of the oculomotor, the sphincter of the iris, the tensor of the choroidea, thus producing dilation of the pupils and paralyzing the power of accommodation. It paralyzes, also, the nerves which regulate the secretion of saliva and of sweat. It paralyzes, further, the cardiac fibers of the tenth pair of the cerebral nerves, the bladder, the intestine.

On the other hand, atropine stimulates the respiratory centers, the vasomotor centers, and especially does it stimulate the gray substance of the brain, which later, however, is paralyzed. To this action is attributable the influence which manifests itself in psychic phenomena.

Toxic symptoms appear from fifteen to twenty minutes after the external application or the ingestion of atropine. If belladonna berries have been swallowed, the symptoms do not appear for two or three hours.

The first *sign of poisoning* is a sensation of dryness in the pharynx which leads to an intense thirst that water cannot quench. Deglutition becomes difficult, the voice is rough and sharp, the mucous membrane of the mouth and of the pharynx is reddened and appears a bright-scarlet. Face and neck are also red but not the rest of the body. The skin is dry, perspiration is

entirely absent. The pupils are dilated. The heartbeats are much accelerated, as are also the respirations, which latter are very deep. On the part of the nerve-centers, frontal pain and vertigo make their appearance; then the ideas become confused; hallucinations of various kinds occur; psychic excitement may become extremely intense. Consciousness disappears after from twenty to thirty minutes, but the patient may continue to laugh, to cry, to beat at his surroundings, and to commit other acts of violence. Sometimes he will roll over and over. Trismus and clonic convulsions of the extremities have often been noticed. In fatal cases the loss of consciousness is preceded by delirium. Coma and general central paralysis is followed by death.

Treatment of Atropine Poisoning

When the poison has been taken by the oral route, it is necessary, first of all, to empty the stomach and the intestines as quickly as possible. For that purpose emetics are given (ipecac combined with tartar emetic, or hypodermics of apomorphine). If the patient has eaten belladonna berries, it is useless to attempt washing out the stomach because the berries cannot pass through the eye of the stomach-tube. I have, in times gone by, followed the advice of the classics and attempted to use the stomach-tube, but always unsuccessfully for this very reason. After the emetic has acted, castor oil should be given in order to remove any poisonous substance from the intestines.

It goes without saying that emetics and purgatives may only be given at the beginning of the intoxication, that is, during the first hours. Later, stomach and intestines are paralyzed by the atropine and can no longer react. In such cases it becomes necessary to administer large intestinal flushings with soapsuds. At the same time it is well to introduce into the stomach weak solutions of tannin or of potassium permanganate, in order to precipitate the alkaloid.

Morphine As an Antidote

When the general symptoms of poisoning have become manifest, it is, above all, necessary to reduce the enormous psychical excitement. Here morphine is of particular benefit. It diminishes the motor excitement and the maniacal conditions and produces rest and sleep, while at the same time it removes the danger of exhaustion by the motor excitement.

The doses of morphine to be employed in poisoning by atropine must be determined very accurately. They must be amply large to control the exaggerated movements, while, on the other hand, they must be sufficiently small so as not to bring on collapse. It is well to remember, in this connection, that persons poisoned with belladonna will bear relatively large doses of morphine, and this fact holds good even in children who, as we know only too well, are extremely sensitive to the action of morphine.

In some cases, however, morphine has been actually harmful and so some authors have advised to replace it by chloral hydrate. In my own humble opinion, this would mean to fall from the Charybdis into the Scylla, for has not Lewin long ago said that chloral hydrate should be stricken from our list of medicines?

The morphine should be injected under the skin in the following dosage:

Hypodermic Dosage of Morphine in Atropine Poisoning

Dose of	morphine,	at	2	years	of	age,	1-100	grain
"	"	"	" 4	"	"		1-30	"
"	"	"	" 7	"	"		1-12	"
"	"	"	" 10	"	"		1-8	"
"	"	"	" 13	"	"		1-6	"
"	"	"	" 17	"	"		1-5	"
"	"		adult	.....			1-4	"

This dose is to be repeated every two hours until the patient is quieted. At the same time, strychnine, in doses of 1-600 to 1-60 of a grain, according to age, should be injected, and this repeated from three to five times in twenty-four hours. This drug is intended to prevent the collapse which is always a possibility.

I advise the hypodermic administration of these two remedies and against the oral route, because the stomach should be left free for the action of emetics, for the antidotal solution of potassium permanganate or of tannin, and later for stimulating astringent drinks, principally black tea and coffee without milk.

When coma has set in, it may be advantageous to administer hypodermic injections of caffeine of, say, 0.01 to 0.20 Gram (1-6 to 3 grains).

For the *prevention of coma* we may properly employ the ambulatory treatment. Two assistants seize the patient, each under an arm, and make him walk, willy-nilly, through the house or in the open air, for hours, with small periods of rest every fifteen minutes; and during these periods of rest the patient may be made to drink strong tea or black coffee, or the dose may be introduced through the stomach-tube. In children the fatal sleep may be prevented by shaking them and talking to them.

Patients poisoned by atropine become easily cold, and therefore must be well covered and carefully clothed.

During the period of coma it is necessary to draw the tongue forward so that it may not drop back into the throat. In fact, we must take the same precautions as in ether or chloroform narcosis.

After the acute symptoms are relieved, the very persistent *ocular disturbances* are treated by instillations of eserine solution of 0.05-percent strength. The dryness of the mouth will yield to pilocarpine, 1-60 of a grain for children of two years and over, up to 1-5 or 1-3 of a grain for adults.

The bladder must be watched and must be emptied with the catheter if necessary. A simple *retention of urine* has often been mistaken for anuria.

In a later paper I shall speak of hyoscyamine, hyoscine (and scopolamine) and duboisine. I will here only mention that hyoscine may, in dosimetric therapy, be substituted for atropine in almost all cases, because its action is more gentle and it is less dangerous.

Flat Foot and Its Treatment

By HARLAN P. COLE, M. D., New York City

THE difficulties attending the condition called flat foot are due to a lack of perfect balance of power between the different muscles of the leg as applied to the problem of perfectly balancing the weight of the body in the different positions it must assume, and assume for a long time.

When every muscle possesses its full amount of vitality, and the person is called upon for only the medium amount of effort, then the balance is perfect and there is no trouble. But when the vitality of one or more, or of all, is reduced, or when the weight is increased (or must be borne for a longer than ordinary length of time), the balance between weight and power is imperfect and something is crowded out of alignment. This necessitates the adjustment of something in the opposite direction, so that the equal division of the weight on both sides of a plumb line, which rises vertically from the center of the foot resting upon the floor or ground, will be continually maintained. This problem of balancing the body on the foot involves continuous attention of all the muscles of the leg and of many of the trunk, and the more difficult the act, the greater the strain.

The Anatomical Explanation of Flat Foot

In order to secure elasticity, or spring, the point at the rear end of the foot which touches the floor (and over which the lower end of the leg is placed) is not directly in line with the leg, but to one side, nearer the outer margin of the foot. To atone for this lack of alignment the muscles that pass from the leg to the inner side of the foot are larger, stronger and more numerous than those on the outer side, and they are thus able to carry the greater burden and preserve the balance of the leg. On this account, if all the muscles weaken, the foot rolls inward, or toward the inner margin, and flat foot or, more properly, pronated foot, results.

As the ankle is a mortised or square joint, it becomes "jammed" when the foot turns to either side on its long axis, and motion becomes more and more limited as the deviation increases. This limitation of motion prevents the adequate action of the leg-muscles, and inhibits the returning of the

venous blood; therefore, in most cases of flat foot there is more or less edema of the leg, the extent of the swelling being determined by the amount of the deviation and the length of time it has existed.

The Arch-Ligaments Do Not Stretch

Much has been said regarding the stretching of the ligaments in the arch of the foot and its responsibility for letting the arches down. If this ever did occur, the foot would permanently lose its ability, for it would soon become concave on its upper surface—and it could never recover. As a matter of fact the ligaments are so arranged that this could never happen, for they are all cemented together into one mass with their fibers so intertwined that stretching is impossible. This, of course, applies only to the longitudinal arch. The transverse, or anterior, arch is controlled by the leg- and foot-muscles, and depends for its contour on the strength of these muscles and on the shape of the bottom of the shoe and the position of the foot—that is, whether it is or is not rotated inward or outward on its long axis.

When I speak of rotation, I refer to the turning of the foot under the pressure of the body-weight, and it is the top of the foot which changes position, being pushed inward or outward by this force. The whole difficulty consists in a sagging of the foot inward and forward, the metatarsal bones all turning toward their inner surfaces, and their distal ends being crowded outward, the weight falling somewhat on the inner margins instead of on the under surfaces. This is especially true of the great toe; and this improperly located pressure, added to the lateral strain upon this joint, accounts for the inflammation at the great-toe joint and the resultant enlargement, called bunion, and which is improperly considered an enlargement of the bone and is often improperly operated upon. This operation is entirely unnecessary, for the restoration of the foot to a normal position relieves the strain on the joint, whereby the cause of the disease is removed and recovery is insured, with the normal use of the joint.

Flat foot often is attributed to the "habit" of out-toeing. While I must concede the possibility of the acquirement of such a habit, I am convinced by long and careful study that the inward and forward sagging and rolling of the foot, and the consequent oblique position of the tibia on the top of the foot, drives the center of the foot inward and the front end outward, and that consequently the disease comes first and the position afterward. In this position there is a strong transverse pressure at the mediotarsal joint—and in a direction that is not intended. But this does not entirely account for the outward pointing of the toe, most of it being due to a rotation of the whole leg at the hip-joint. This is found easier by the sufferer; the pronation of the foot renders the ankle-joint less movable, and it is easier for him to point his toe outward, and roll the foot from the outer to the inner side, than to attempt to go from heel to toe—in fact, the heel-to-toe act is almost impossible.

The location of the heel of the ordinary shoe directly under the os calcis, which is to one side of the weight-line of the leg, raises the pressure-point farther above the floor and lessens the ability of the muscles to control it.

The Treatment of Flat Foot

In discussing the treatment, I may be forgiven for attempting to explain why the treatment advised in the books has met with so little success. So far as I can discover, five methods are advised: (1) Arch-prop; (2) strapping; (3) braces; (4) operation; (5) educational and developmental exercises.

The arch-prop fails to correct rolling of the foot, because it is placed inside an incorrect shoe that permits the rolling, and the prop and the foot go over with the shoe. Furthermore, the prop is often so painful that it is intolerable.

Strapping is of very little benefit, for if a corrective position can be accomplished, either the foot cannot be used while in that position, or the straps soon slip and the same old incorrect position is resumed. One surgeon has his patients hold the foot in an "overcorrected" position for an hour every evening. Even if they do this faithfully, it is but one hour out of the ten that the patient is on his or her feet, and the

advantage is largely on the side of the deformity.

The brace has proved itself so ineffective that it is now seldom advocated by the profession. The reason is that it is such a handicap that it reduces the vitality of the leg muscles, and they are less able to carry their burden.

An operation for fixing the joint may prevent the rolling of the foot, but it necessitates

Fig. 1. "The condition called flat-foot begins with a sagging and rolling of the foot toward the inner border"

walking without the use of the ankle-joint, and this causes a change in the position of the whole leg and part of the trunk, which leads to almost if not quite as much difficulty as the operation was called upon to correct. Tendon transplanting has failed notably.

Educational and developmental exercises are at best practised but a small part of the time, even with the faithful, so that the advantage is again with the deformity—more than ten to one—and the treatment almost inevitably fails.

If all this is correct, the question arises, What is to be done?

The only answer to this is that some means must be provided whereby the foot will assume a normal position every time the body-weight is brought to bear upon it and maintained in that position all the time the weight is resting upon it. The remedy must permit of the normal action of all the joints involved in walking, and of all the muscles that move all the joints. To this end I have, during the past twenty years, given much time and study to the making of a shoe that will accomplish this purpose.

The Shoe that Corrects Flat Foot

The surgeon has never given much time to the study of shoe-making, and the shoemaker or shoe dealer has never studied anatomy or done much in the line of dissecting. As a result of this study, I have designed and developed a shoe the interior of which is built and shaped to the contour

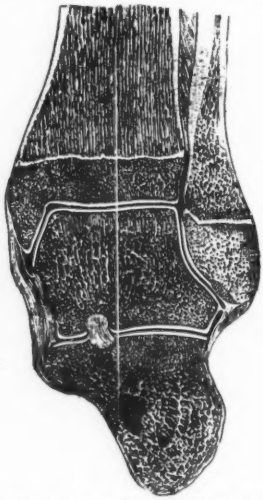

Fig. 2. "The shoe must be supplied with a resisting point directly under this most important weight-line"

and position the foot should occupy during the act of weight-bearing and walking, while the shape and position of the bottom of the shoe prevents its departing from that contour and position under pressure from above

or below. To this shoe the name "Anatomik" has been applied.

The construction of the Anatomik shoe is based on the philosophy of the development of the condition for which it is used.

That is, the condition called flat foot begins with a sagging and rolling of the foot

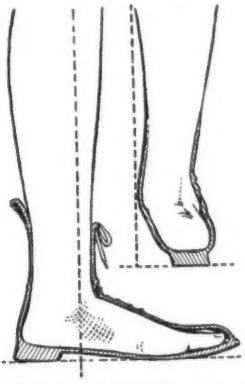

Fig. 3. With the ordinary shoe "much strain comes on the bottom of the foot, especially its inner margin"

toward the inner border, first at the point where the tibia is attached to the astragalus, and where the head of the astragalus articulates with the scaphoid. The shoe, to prevent this act, must be supplied with a resisting point directly under this most important weight-line, and the neighboring parts of the shoe must be so shaped and constructed that they will aid this resisting point and take some of the weight-pressure, so that it will not fall on too limited a surface lest pain and inflammation result or the limited surface be not sufficient to accomplish the purpose.

Fault of the Ordinary Shoe

In the ordinary shoe the narrowest part of its base is the point directly under the tibia, and this point is made narrow by cutting away the sole of the shoe from its inner border, so that in looking at the under surface of the shoe we shall see that, whereas the inner border of the part occupied by the foot is carried almost straight forward from the rear end, that part of the sole to which the heel is applied curves gradually toward the outer margin, so that it becomes narrowest just in front of the anterior border of the heel. Under this narrowest part there is usually no support, and much strain comes on the bottom of the foot, especially its inner margin, for it is over this inner margin that the tibia is located.

In the Anatomik shoe the sole is wider at the point described than at any other except at the ball, where the foot is widest, and the

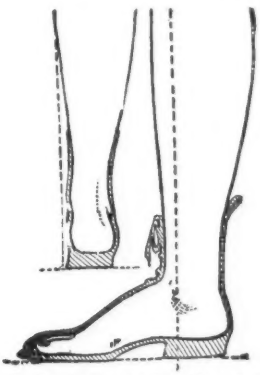

Fig. 4. In the Anatomik shoe the sole is wider and the heel carried forward

heel of the Anatomik shoe is carried forward until it arrives at a point under the anterior border of the lower end of the tibia.

The sole of the shoe is also adapted to the shape of the foot, so as to prevent the sinking of the distal ends of the central metatarsal bones and lateral pressure toward these central bones. It also prevents undue local pressure on the under surface of these

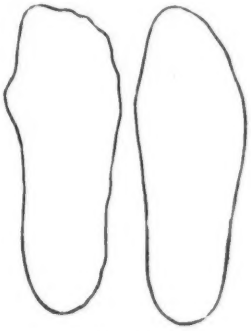

Fig. 5. The sole should be adapted to the shape of the foot

bones at the point where callosities are always found.

The shape and size of the Anatomik heel have impressed the people, the shoe dealer and the profession alike with the idea that

the whole merit of the shoe was contained therein alone. But this is only a part of its merits, the other being embodied in the contour of the whole shoe. The heel, however perfect, would be of little use without a proper place to attach it.

It is usually considered that all feet differ, and therefore one model cannot be used for all. To this I would answer that the teachers of anatomy the world over do not use the same foot for illustrating their lectures, still all the students learn of the same bones by name, number and shape, and each foot is a perfect model of each other, the only difference being in size.

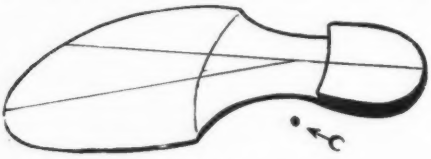

Fig. 6. Heel of ordinary shoe

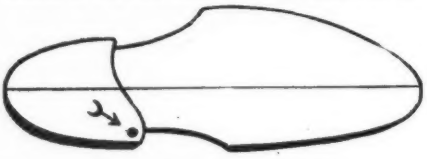

Fig. 7. Heel of Anatomik shoe

All flat feet develop in the same way, in the same direction, for the same reason, because of the same attachment of muscles and the same location of the weight-bearing point. Flat-footed people all need the same kind of treatment, the only difference being in the amount of adaptation of the remedy, therefore the same design of shoe when adapted to the length and width of the foot will do for all flat-foot cases.

Experience shows us that the condition called "flat foot" causes more than seven-tenths of the foot-difficulties, therefore seven-tenths of the foot difficulties require the same kind of a shoe. On this account, and in order that they may be available for the use of the profession, the shoes are made in all regular sizes, and are being placed with one shoe dealer in every city of importance all over the country. Physicians may procure them for their patients in those cities where agencies have been established already, or from the headquarters of the Anatomik Footwear Company, in New York City.

The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—This is a continuation of the series by Dr. Moody. In it the Doctor describes some of the history of the tribe since the coming of the whites. The story will be continued next month.

III.—ENTER THE PALE FACE

UPON the return journey the explorers halted for several days at Kamiah and gathered up their horses which had been left with Twisted-Hair when the journey to the Pacific was begun in boats. It was probably at this time that a strain of white blood was poured into the Nez Percés' veins, as was also a slight tinge of African, for Captain Lewis' black servant was very popular with the dusky ladies. Thus the whites, as has ever been their wont, sowed the seeds of future distrust of all whites among the Indians.

When the travelers had collected their horses and set out upon their return across the Bitter Roots, they were accompanied by several of the young men of the Nez Percés. Possibly some of these Indians remained with the expedition until it had reached the borders of white settlement on the east, thereby gaining a knowledge of the white people. There is a story current that early in the '20s a delegation of Nez Percés Indians journeyed to St. Louis in search of someone to teach them of a Book of which they had heard from the explorers. Diligent inquiry among the older men of

the tribe has signally failed to corroborate this narrative in any degree. The thought doubtless had its birth in the enthusiastic mind of some zealous missionary.

The interval between 1806 and 1837 is enveloped in obscurity. A few trappers

Too-Lah, an old Indian woman from whom I gleaned many things

both of the Hudson Bay Company and of the Northwestern Fur Company penetrated the country of the Nez Percés and skimmed the cream of the rich furs.

The First Clash With the Whites

The first Nez Percés blood shed by the whites was by a citizen of the United States, and no words are sufficiently derogatory to condemn his action.

John Clarke, one of the partners with John Jacob Astor in the American Fur Company, found himself, May 30, 1812, in the country of the Nez Percés. The American Fur Company had died. Great Britain had stepped in and ordered the Yankees off British soil. A portion of the American contingent at Astoria had shipped for home by way of the Sandwich Islands, another contingent left *via* the Columbia and Snake rivers for the East. It was their intention to visit the various trading points in the interior and inform the residents of the change in affairs. This duty was delegated to Clarke and his party.

Clarke was a tall, good-looking man, but very haughty and much given to pomp and circumstance. He would not use the same drinking vessels employed by his companions but reserved for his own use a handsome silver goblet, which he guarded with great care. The Indians saw with what reverence this vessel was used and so jumped to the conclusion that it was "*wy-ya-kim*," that is, sacred, and consequently "great medi-

Pot-Latch Fanny—the meanest Indian that ever lived

cine." One of them, watching his opportunity, stole the sacred vessel, but was immediately detected. With great harshness Clarke tried the culprit by drumhead court martial and executed him, despite the protests both of his own men and the Indians.

This, so far as history records, was the first Nez Percés blood shed by white men, and that it was very ill-advised and hasty will be admitted by all. The Indians did not resent the crime, but there is little

Medicine Man (Tu-at) in full regalia, but carrying rifle instead of drum or rattle. Flag for signaling

Nez Percés type. Note design on hand-bag. Work done in grass fiber

doubt that the memory of it remained with them. In fact, I know it did, for they have often told me of it, and always more in sorrow than in anger.

The Coming of the Missionary

Until the establishment of the mission at Lapwai Creek the Nez Percés had but little direct association with the whites. The Hudson Bay Company had posts established near the Pacific Coast and a few trading points in the interior. None of these, however, were among the Nez Percés, their country being too remote. Such knowledge as they possessed of their white cousins was gleaned from occasional visits to the trading posts.

About 1830 the American Board of Commissioners for Foreign Missions turned its attention toward the West. The commissioners became enthused with a great desire to Christianize the savage Indian tribes inhabiting the vast region explored by Lewis and Clarke. Prior to this time missionary efforts among the tribes of the Plains and those of the Pacific Coast had been confined to the few Jesuits that had entered the country, principally as attachés of the Hudson Bay and Northwest Fur Companies. Just how much the knowledge that the catholics were working among the Indians influenced the American Foreign Mission Board cannot be estimated; that it had some effect is quite evident.

In 1835 Rev. Samuel Parker and Dr. Marcus Whitman were appointed a committee to explore the region from St. Louis to the Pacific Coast and report on the advisability of sending religious teachers into that region. They set out upon their journey in March and remained together until they had reached Green River, Wyoming, when Dr. Whitman turned back, leaving his companion to pursue his journey alone.

Mr. Parker spent some two years in his survey, during which time he visited all the principal tribes of the Pacific Coast, including the Nez Percés. He returned to the East and laid his report before his Board, with the recommendation that no time be lost in cultivating the religious field lying ready to the plow.

Catholic Indian mission. Built 1841, without nails. Still in use

Afterward Mr. Parker published his experiences among the Indians, in a quaintly written volume which contains a great many things that are not true as well as a great many that are. His zeal for his church led him to construe many things the Indians said into most earnest pleadings for religious light. He asserts that the Nez Percés, for instance, followed him for days, begging him to return and remain among them, teaching them the way of truth.

Whitman's Expedition

Even before Mr. Parker had reached home, the Mission Board, by reason of letters forwarded by him, was getting ready an expedition looking toward the establishment of a chain of missions in the West. This expedition was under control of Dr. Marcus Whitman, who afterward lost his life at Waiilatpu. One member of Whitman's party was the Rev. H. H. Spalding, with whom we have somewhat to do. Spalding seems to have been an opinionated, overbearing, conceited, ignorant bigot, who had a most excellent wife. His one redeeming virtue was an indefatigable industry. He was a horse to work and he insisted upon everybody around him doing so also.

When the party reached the Grande Ronde, traveling over the "old Oregon trail," Spalding left his chief and, in company with some Nez Percés who were journeying with the expedition, turned across into the Nez Percés country. He doubtless was induced to do this by the praises given the Nez Percés people by Lewis and Clark and thought they would prove teachable subjects. He reached Lapwai Creek and, in 1837, established the first protestant mission on the Pacific Coast — that is, unless Dr. Whitman had reached the Walla Walla Valley before Spalding reached Lapwai. The missionary effort was crowned with success from the first. The savages proved willing learners and many of them professed Christianity.

It may be as well to observe here that a profession of Christianity on the part of

Half-Breed, Nez Perces type. Note influence of white contact in dress

an Indian does not imply that the Indian becomes a Christian in all that civilized people understand by the term. The Indian may conform to all the externals of the faith, but he holds in reserve a proviso that if the new belief does not satisfy his soul's desire he can revert to his ancestral teaching, and it is safe to assert that the new faith never does satisfy. The teaching of the Christian religion may be all right for the Indian to live by, but when he comes down to the shore of the Dark River he very promptly lays aside the robes of the Nazarene

Child types. Note adenitis (tuberculous) in child's picture

and dons those of his red gods. I am well aware that this assertion will meet with disapproval on the part of those zealous ones who have spent their lives fondly believing that the proper solution of the Indian problem is to Christianize them.

The Effort to "Civilize" the Indians

Mr. Spalding set to work with commendable energy to make the Indians self-supporting. He fenced fields and tilled them, using the Indian ponies which he broke to harness. The soil of the Kooskia is very fertile and the seed planted throve amazingly. Fruit trees were planted, many of which remain today bearing their yearly burden of fruit. He established a mill and ground the grain into flour. While he was doing this Mrs. Spalding established a school and taught the women the essentials of housekeeping, also dressmaking. It is amusing to note that even now the Indian women fashion their garments after the patterns taught them by Mrs. Spalding. As before suggested, Mrs. Spalding was a lady of rare good sense and excellent tact in dealing with the Indians. She kept the balance between the irascible character of her spouse and the natural indolence of the Indians.

As the years rolled away other missionaries came and established other missions. One was erected at Kamiah near the confluence of the Lochsaw with the main Kooskia. This was not destined to prove a decided success. Chief Looking-Glass, then a young man, was just coming into power among his tribe and, having himself been educated by the catholics, foresaw the effect of educating his people. He opposed the mission so strenuously that it became necessary to abandon it. For years no teaching was carried on at Kamiah until the sisters McBeth came and resumed the work. One of them, Miss Kate C. McBeth, remained among the Kamiah tribe until long after my advent among the Nez Percés, and that she did a good though somewhat restricted work none may gainsay.

The Catholic Missions

About the middle of the nineteenth century the catholics directed their attentions toward the Nez Percés. They were impelled to do this by reason of many members of this tribe attending their school and church at St. Ignatius Mission on the Flathead in Montana. The Flatheads are blood-cousins of the Nez Percés and the association between these people is quite intimate. While the catholics did not establish missions among the Nez Percés until later, they did send traveling teachers, and many of them professed at least nominal allegiance to the church of Rome. They afterward established a mission and farm school on Lapwai

Creek, several miles above where the Spalding mission stood.

Justice to the catholics compels the statement that their method was far more successful (as it has always been with savage peoples) than those of the protestant societies. For one thing, they taught the Indian to observe the forms of the religion without attempting to instill into their minds polemical doctrines. They, further, urged the savages to become industrious and frugal. And it is a fact to this day that the catholic Indians among the Nez Percés are the most well-to-do and prosperous of all.

For fear that my readers will discover an inconsistency in the above statement, when compared with what I have previously said in regard to Spalding, I will make this explanation: Spalding *did* teach the Indians industry, and had he lived a century his labors might have borne fruit. He retired from the missionary field, however, and took up secular pursuits. Those who came after were less industrious physically and more zealous religiously; in consequence, while their converts became religionists, they neglected to provide flour and meat.

The Advent of the Soldier

The advent of the soldier among the Nez Percés, as in all other Indian tribes, was an event fraught with the most distressing consequences. The "man behind the gun," while he might be the defender of the nation, is responsible for the destruction of the red man in a greater degree than any other one element. The ravages of syphilis among the Nez Percés can be traced directly to the appearance of the troopers at Lapwai. While the Nez Percés women were (and are) in the main chaste, they were (and are) much the same as their civilized sisters in that respect. Fine clothes, gaudy jewelry, and the many things dear to the feminine heart appeal to them quite as powerfully as they do to the women of the scarlet dress and peroxide tresses. Ignorant as they were of the terrible consequences of the luetic disease, it was only a few years before it became inoculated throughout the entire people, until today it is a rare thing to see an Indian not tainted with the consequences of civilized (?) licentiousness and vice.

The savage Indian has always been virtuous. Inoculate that same Indian with a tinge of civilization, and he becomes lewd. No people learn sooner than do the Indians that the sexual passions are the one thing for which the white man will sell body and soul to gratify them. What a horrible commentary on our boasted enlightenment.

The Discovery of Gold

In 1861 gold was discovered on Rhodes Creek in the Nez Percés country. The camp of Pierce was born, and in the grand stampede into the mines the Indians got their second installment of association with the whites. The overland trail from Lewiston, at the mouth of the Kooskia, lay right through the heart of the Kooskia Indian settlements, and in the years from 1861 to 1869 the savages were thrown in contact with the worst element of Anglo-Saxon civilization. That that association was not conducive to the moral and physical well-being of the Indians goes without saying. It is astonishing that they did not suffer from the contamination more than they did.

In the course of time the rich gravels around Pierce were worked out, the miners sought newer El Dorados, and the Indians sank back to their old-time life led before the white man came. The few whites who had married Indian women, and an occasional prospector, furnished the Indians with their sole white companionship. Lewiston, once the bustling supply depot for all the placer-mining country, relapsed into a diminutive frontier village where an Indian came occasionally to trade, but in the main but few white people penetrated the heart of the Nez Percés country save on the Imnaha and Wallowa, where Chief Joseph and his people lived, which was filling up with homesteaders, much against the protests of the Indians.

This settlement of the Imnaha and Wallowa afterward terminated in the Nez Percés War, and the contact with the white people there engendered a hatred upon the part of the Indians which was only wiped out in blood. It was during the controversy over the lands that the Indians concluded

that the medal had lost its talismanic influence and they buried it.

It would be tedious to trace the ramifications of the scheme by which the Government gradually absorbed the Indian territory and peopled it with whites. Enough of it will be given in a future paper to show the causes for the war and the justification, judged from Indian standards, for the same. It will be enough here to state that by degrees the Nez Percés were shorn of their ancestral acres until, in 1895, they gave up their tribal form of government, took lands in severalty and attempted to approximate to civilized modes of living, an attempt which has resulted exactly as any student of savages might have foretold—in almost total extermination of the tribe.

The Climate of Florida

Considered from the Therapeutic Standpoint

By WILLIAM LEE SECOR, M. D., St. Petersburg, Florida
Formerly Head of the Department of Physiology and Professor of Therapeutics in the Chicago College of Medicine and Surgery

DURING the past few years much attention has been directed toward Florida by the extensive advertisements of various real-estate companies. In many of these advertisements some pretty broad statements are made, and if one were to believe it all, he would get the idea that all that is essential to procure perpetual health, wealth and happiness is to purchase a ten-acre tract of Florida land, then sit in the shade and watch it produce dollars at the rate of from five hundred to two thousand dollars per acre annually.

While I am quite sure that one can live in "peace and plenty" and maintain good health in Florida with less effort than almost anywhere else, yet nothing worth while can be accomplished here, as anywhere else, without the expenditure of an equivalent amount of brawn and brain.

The State of Florida is one of the greatest assets of our nation. Not because of its mines or forests, nor on account of the fertility of its soil—none of which are to be despised—but because of its health-giving climate. We as a people are just beginning to realize that national health is more important than national wealth.

The People Who Winter in Florida

Thousands of men and women from the North and the middle South who "do things" come to Florida each winter. Captains of industry, politicians, lawyers, physicians, clergymen and men of affairs who have been working on high pressure and overdrawing their vital reserve come here each winter, and after a few weeks spent in our ozoniferous breezes and glorious sunshine have accumulated a new reserve force and return home to take up their work with renewed zest and increased energy. If Americans only realized the important bearing that these national playgrounds and health resorts have upon our national welfare, that clearer brains and stronger nerves mean better citizenship, they would be quicker to grasp the importance to our people of Florida's climate.

After months of close application to business under the high-pressure of modern times nothing could be more beneficial than a sojourn in a climate that is especially conducive to perfect rest and relaxation.

Peninsulas have been sought as health resorts since the beginning of history. The wonderful climates of southern France, Spain and Italy have been immortalized in poetry and song, yet it is stated by those who seem to know that neither Europe or Asia or any other land can boast of a climate that is superior to that of our own Florida.

How little most of us in the North know of Florida as it really is! We think of it as a swampy, malarious section, so hot most of the year that it would be next to impossible

for white people to endure it. It is true that there is much swamp land in Florida, but this is rapidly being drained and converted into the most fertile truck gardens. On the other hand, there is plenty of high, dry land suitable for all-the-year residence. In some sections there is malaria, yes; but, then, I see no more there than I did up north.

The official Weather Bureau report shows the mean temperature at Tampa to be 57 degrees for January and 80 degrees for July. The highest temperature ever recorded at this station was 96 degrees, while 103 has been recorded at Chicago, 109 at Los Angeles, and similarly at other northern points. It is a positive fact that in some sections the summers of Florida are really delightful. It will get very hot in the sun, but in the shade the ever-present cool breeze makes it pleasant.

Where Shall the Doctor Send His Patients?

In sending a patient away from home for change of climate, the family physician must consider a number of questions. Thus, for instance, he must decide whether his patient will do best at a high or medium or a low altitude, and whether the atmosphere may contain a high percentage of moisture or must be dry. He must know whether there are high winds or sudden changes of temperature. He must consider the facilities for transportation, and whether or not proper accommodations may be obtained at the end of the journey. He should also know something of the physician under whose care he may place his patient while at the resort.

Florida is one of our most typical low-altitude resorts. In fact, we may here live practically at sea level. The highest point in this state has an altitude of only 301 feet. Florida may be reached from almost every section of the country without passing over mountains at high altitudes, which is an important consideration when heart-cases are considered. While the term "dry salt air" is used when speaking of Florida's climate, there is usually quite a high degree of humidity.

Florida is not subject to the sudden changes of temperature that we see in the high altitudes, as at Denver. In fact, the even and regular temperature-curve is one of the most important elements in its climate.

We find, however, that there is a decidedly marked difference in this respect between the east coast and west coast. The east coast is at the mercy of storms from over the Atlantic, while the west coast is protected from these by the intervening pine forests and its temperature is kept even by the influence of the warm waters of the Gulf which are several degrees warmer than the Atlantic Ocean at the same latitude. Inland Florida is preferable to the east coast in this respect.

Where to Go in Florida?

In sending a patient to Florida, the matter of exact destination, in many cases, is most important. If you are sending a patient who needs simply a change of environment and climate, on general principles, one that would be interested in and benefited by the most gorgeous of social whirls, send him down the east coast. If, on the other hand, you have a patient for whom you desire rest and relaxation in a most delightful climate but yet without the social life of the east-coast resorts, send him to an inland town or down the west coast.

In 1885 a paper was read before the Section on Hygiene and Sanatation of the American Medical Association in which the author took the position that after careful investigation and study of the climates of all sections of the United States he had decided that, without a doubt, the most healthful climate in the country is that of the Pinellas Peninsula (a subpeninsula of the west coast of Florida), and it was recommended that a great national health city be built at this point.

There are a number of towns on the west coast that offer good accommodations to the health seeker. After a careful study of the state I decided that the paper read at the A. M. A. meeting was about correct and so located at St. Petersburg, a town on the aforementioned Pinellas Peninsula, whither come thousands of seekers after health every year, and whence few go away disappointed.

Many in position to judge consider the climate of Florida superior to that of Cali-

fornia. At all events it is equal to it; and when the matter of distance is considered—which means so much to those not in good health—Florida should certainly be favored by physicians located east of the Mississippi. For certain, Florida is a "fountain of youth," for hundreds of elderly people have added years to their lives by spending their winters within its confines.

Don't Go North Too Early

A very common mistake is made, however, in returning to the North early in spring, for every year we learn of tourists who, after leaving the warm climate of the South prematurely, encounter cold, damp weather at home and as a result contract influenza, pneumonia or simialr ailments. One not in the best of health should remain south until the home climate is thoroughly settled. It is better to come late and return late than to come early and return early.

While almost any elderly or feeble person would be benefited by spending the winter in Florida, there are certain conditions and diseases that are particularly well handled in this climate.

In kidney diseases the increased activity of the skin, so manifest here, relieves the load on the kidneys and improvement is the rule. Insomnia and neurasthenia are almost always benefited and frequently cured. Asthma usually is relieved. Heart cases do well. Some forms of skin disease yield more readily to treatment here than they do in the north. Postnasal catarrh and chronic bronchitis are usually benefited although some types are aggravated. Chronic articular rheumatism and other forms of arthritis, neuralgia and neuritis yield to treatment more readily in this than in a less favorable climate.

At St. Petersburg, as well as at a number of other places in Florida, facilities are provided for the employment of hydrotherapy (such as hot-sulphur and salt-water baths, Turkish, electric-light and spray baths) as also for electrotherapeutic measures, including high-frequency currents and radiography. In fact, the means are at hand for the application of all the forms of modern physiologic therapeutics that have proven of value in the treatment of disease, so that northern physicians sending patients to Florida may prescribe almost any line of treatment and feel assured of having it correctly carried out.

Tuberculous cases, except those in the earliest stages, do not as a rule do well in this section. It is claimed that better results are obtained with these patients at inland places.

A mistake is frequently made by patients coming to Florida in that they think the more they are exposed to the sun the better. Investigation seems to show that prolonged exposure to bright sunlight has a detrimental effect upon the nervous system. This difficulty can be overcome, however, as I have found, by carefully shading the head, back of the neck, and eyes; the rest of the body will bear much sunlight and the patient be benefited.

One other mistake should be warned against. When one leaves the cold, frozen North and after a few hours spent on the train wakens to find himself amid the flowers and sunshine of a perfect June day, the tendency is to throw off winter clothing and don midsummer apparel. Under no circumstances must visitors, especially invalids, yield to this temptation, changes of clothing being made with great discretion and under the advice of the local medical man.

Amputation in Lesions of the Hand

When and How to Amputate

By RALPH ST. J. PERRY, M. D., Farmington, Minnesota

EDITORIAL NOTE:—In this month's paper Dr. Perry gives some very valuable advice on when to amputate and when not to do so. He very properly condemns the furor operativus in cases where conservative would be far better surgery. His advice is sound, and his directions in cases where amputation becomes necessary are based on personal experience and study.

II.—ILLUSTRATIVE CASES

AS TO the technic of amputations in the hand for trauma, there is no special need of instruction; the same aseptic and antiseptic measures are to be exercised as in other surgical procedures.

A careful study of the cases here presented will give a good idea of the procedures to be adopted in cases resembling them.

Case 1. Mechanic. Middle finger was caught between a set of loosely adjusted gears which a fellow employee was slowly turning; the second phalanx apparently was crushed and in excellent condition for amputation. Upon closer inspection there appeared to be fairly good circulation in the distal parts of the finger, so the crushed parts were cleansed with iodinized gasolin, carefully placed in a position resembling the normal shape of the finger, dusted with iodoform, wrapped in gauze, and the hand bandaged upon a woven-wire splint. This dressing was renewed daily for three days, when it was apparent the parts were going to survive the injury. The hand was then dressed upon a Marsee splint with lateral supports and dressed daily for three weeks, then semiweekly for one week, when the patient was discharged with a useful finger. Passive motion was instituted on the fifth day and active motion encouraged after the second week.

Case 2. Printer. In working around a paper-cutting machine, he included his left thumb in a package of cards he was trimming up, the thumb being cut square off just back of the distal joint. Fortunately the man was one who could be reasoned with and was soon made to see the necessity of cutting away part of the bone and soft parts in order to get material with which to cover the stump end. This was done, the flap being taken from the palmar tissues after sacrificing the dorsal, and in three weeks the patient was discharged with a serviceable thumb which has never bothered him in the subsequent twenty years of active work at his trade.

Usually patients presenting digits which are cut off squarely or obliquely (see following case) are the hardest kind to handle; they cannot be made to understand the philosophy of palmar flaps or the iniquities of palmar scars, and they usually have little faith in the surgeon but rather more in some "healing salve" which is expected to cause the wound to scab over without sacrificing any more tissue. Under such circumstances it is better for the surgeon to refuse to accept the case than to carry out a course of treatment which is against his better judgment, sure to lead to unsatisfactory results but the blame for which the patient will most cheerfully and assiduously cast upon the surgeon.

Case 3. Farm-hand. Index-finger cut off in a feed-cutter at the third phalanx with a shortage of the palmar surface. By the time he reached the surgeon's office he was gloriously, profanely and pugilistically drunk from the effects of the whisky that had been given him by indiscreet friends. His employer having assumed all responsibility in the affair, the nature of the treatment was explained to him and by him consent was given to cut away the dorsal tissues and form a palmar flap from the tissues of the second phalanx. At the first dressing there was much adverse comment, threats to change doctors and to sue for damages; to all of which he was cheerfully told that he could change doctors as suddenly as he chose and could sue and be d——d.

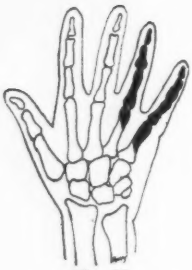

Fig. 22

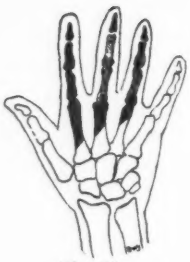

Fig. 24

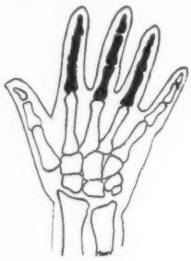

Fig. 26

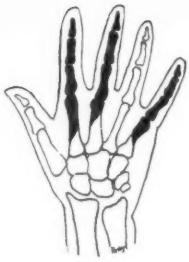

Fig. 28

The patient continued under my care for three weeks, with dressings daily for one week and semiweekly for two weeks, when he was discharged with a useful soreless finger. Some three years later this same man encountered a man with a painful, ulcerated palmar scar on one of his fingers, and he had the temerity and good grace to come to me and acknowledge the wisdom of the form of amputation made in his case and to apologize for his long-enduring "grouch."

Case 4. Circus canvas-man. While engaged with another employee in driving stakes for the big tent, he inadvertantly placed his ring-finger on top of a stake while his fellow swung the heavy sledge hammer upon that same stake top. When seen at the surgeon's office, the terminal phalanx was found to be pulpified.

The parts were cleansed in warm cyanide of mercury solution; the finger-tip was cut off far enough back to give a good palmar flap; the bone was cut off square with a small saw, after dissecting loose a periosteal flap, which latter was laid over the sewn end of the bone; the tendons, which had been cut off long, were brought together over the bone end and sutured with catgut, end to end; the palmar flap was brought into place and sutured. The finger was dusted with bismuth formic iodide, wrapped in several thicknesses of gauze, and firmly dressed by means of strips of zinc-oxide plaster to a short tin palmar finger-splint. He was dismissed with a letter to a surgical friend in the town where the circus made its next stand, and was never heard of again.

Case 5. Blacksmith's helper. Some two weeks prior he had had the end of the middle finger mashed by a hammer blow and had undertaken to heal the injury by home treatment. Investigation showed a necrosed terminal phalanx covered with a mass of crushed soft parts in various stages of granulation and necrosis.

The bone was removed; the soft parts were trimmed up so as to secure the best-possible results in shaping a new finger-tip; the hand was kept in a hot boric-acid solution for twelve hours continuously. The hand then was dried, or rather drained, and dusted with iodoform, dressed in antiseptic gauze and fixed upon a Marsee splint with plaster strips. The finger healed kindly in two weeks, chiefly because of the good general physical condition and excellent habits of the patient.

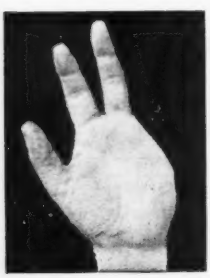

Fig. 23

Fig. 25

Fig. 27

Fig. 29

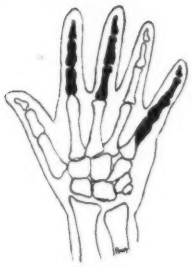

Fig 30

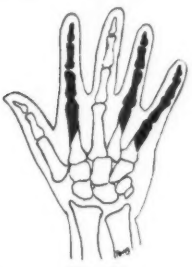

Fig. 32

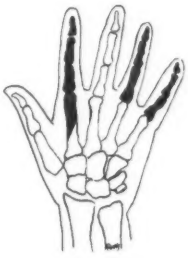

Fig. 34

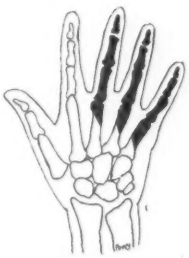

Fig. 36

A few months later the patient returned, seeking relief from a deformed nail growth which interfered with his work. As nothing less than an excision could remedy the untoward result, which was due to leaving some nail-matrix tissue in the original plastic work, the patient decided to trim the nail close, endure the inconvenience and occasional hurting and forego the joys of a secondary operation.

Case 6. Book agent. In her childhood, says this fair maiden, she had suffered some injury which led the surgeon to amputate the little finger at the middle of the first phalanx, leaving a useless stump which always was in the way. By stuffing her glove-finger with cotton, the disfigurement was concealed when away from home. A proposition to remove the stump and the distal half of the corresponding metacarpal bone, thereby eliminating both the disfigurement and inconvenience, was promptly rejected.

Case 7. Express agent. Years previously the man had suffered an amputation of the index-finger at the proximal third of the first phalanx, leaving a stump, which was thinly covered with tissue and in consequence thereof was frequently sore from bruises and in winter suffered from cold. This man cheerfully submitted to an operation for the removal of the stump and the distal half of the corresponding metacarpal bone, a procedure which did away with all previous annoyance and disability.

Case 8. Railway brakeman. In guiding a coupling link into position his hand lingered a trifle too long between the couplers, resulting in a mashed index-finger. An examination showed that only about one-third of the first phalanx could be saved, so, to make a more useful result, one less subject to future damage and more cosmetic, the amputation was made at the middle of the metacarpal bone. The incision for removing the metacarpal bone was made rather to the inner side of the bone so as to bring the scar well upon the dorsal aspect after healing, the excess of soft tissues being so trimmed and shaped as to form a palmar flap large enough to reach up and coapt at the line of incision, thus presenting an unbroken skin surface in the parts subjected to friction, bruises, and so forth. An uneventful recovery followed.

Case 9. Farmer. In driving fence posts, aided and abetted by a muscular farm-hand

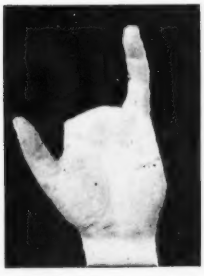

Fig. 31

Fig. 33

Fig. 35

Fig. 37

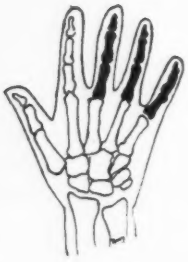

Fig. 38

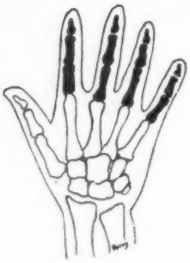

Fig. 40

who swung a sixteen-bound sledge hammer, his left middle finger carelessly halted on top of a post just as the hammer came down with forceful impact. The second and third phalanges were reduced to useless pulp and the soft parts of the first phalanx were burst open. An amputation was made, leaving a little less than half of the first phalanx as a stump, thus maintaining the normal relations between the thumb and index-finger and conserving the strength of the hand.

Case 10. Band-saw operator. The man's hand came in contact with the moving saw, resulting in the loss of the little finger just at the metacarpophalangeal joint, the section being exactly transverse. In order more easily to remove the distal two-thirds of the metacarpal bone and to facilitate the formation of a palmar flap, an elongated wedge-shaped piece of tissue was deliberately cut out, which procedures permitted the easy coaptation of the parts after the removal of the bone, and did away with the superabundancy of tissue at the site of the knuckle, thus enhancing the cosmetic effect. Usually in cases of amputation of the little finger there follows, in course of time, a shrinkage or atrophy of the hypothenar eminence; but this atrophy is muscular, due to loss of use and not to loss of nutrition, and as there is no such atrophy of the tissues at the knuckle site, unless the excess of these latter tissues is removed at the time of operation, there is apt to be a disproportion of the parts when the atrophy develops, which will mar the cosmetic effect.

Fig. 39

Fig. 41

Case 11. Railroad brakeman. The index- and middle fingers were so badly crushed in the making of a coupling that it was useless to attempt to save any part of either. So amputations were made, including the distal two-thirds of the index metacarpal and the distal one-third of the middle-finger metacarpal. Quite a goodly amount of dorsal tissues was sacrificed to permit of getting a palmar flap which would bring the scar on the back of the hand and also do away with a mass of soft tissues over the bone stumps that would have been a detriment to the hand.

My experience has been that where the pad of soft parts left covering the bones is too bulky, it is apt to become flabby, gets in the way when the hand is using tools, is more subject to bruises, and is more liable to become sore, tender and irritable.

Case 12. Merchant. The bursting of a shotgun barrel lacerated the index- and ring-fingers so badly that amputation was made necessary. The middle finger was patched up and saved. In amputating the index, the distal half of its metacarpal bone and in the case of the ring-finger the distal two-thirds of its metacarpal bone, was removed. By so doing, a better and more cosmetic result was secured and the little finger brought nearly to the thumb, thus increasing the utility of the injured hand. In cutting out the metacarpal bones, that of the index-finger was done as detailed in Case 8 (q. v.), and that of the ring-finger was removed through a dorsal incision *without injuring the palmar tissues*, the oblique section of the bone being effected with a Hey's skull-saw. The bulging of palmar tissues due to bringing the little finger up into opposition with the middle finger was left to nature's care and gradually disappeared as the hand was used in the everyday occupation of the patient.

Case 13. Day laborer. His hand got caught between the ends of two piles of

heavy iron water-pipes which were being pushed together in a trench. The index- and little fingers were crushed so that after two days' expectant treatment it became manifest that they could not survive the injuries. Amputations were made, cutting away the distal half of each corresponding metacarpal bone and using the available palmar tissues for flap formation. Owing to the bruised condition of the tissues, not only of these fingers but of the metacarpus generally, there ensued much inflammation and suppuration and healing was much delayed. Passive and active motion was kept up daily throughout the healing, and it is due to this fact that the tendons were not bound down by adhesions. After six weeks of almost daily attention the man was discharged with a useful hand in which there was good flexion and extension of all remaining fingers.

Case 14. Railroad section man. In handling some old rails one of them slipped from another workman's grasp and the end fell upon this man's hand, mashing the middle and ring-fingers. The man's work was the lowest grade of manual labor where strength rather than skill was the essential, so in order to preserve for him as wide a grasping power as possible, the two fingers were amputated without disturbing their metacarpals further than to remove the palmar knobs from the head.

Case 15. Buzz-sawyer. The man's hand came in contact with the moving saw, which promptly cut off the little and ring-fingers at the knuckle. In trimming up and shaping the parts so as to form a good serviceable hand, the distal two-thirds of the little-finger metacarpal bone and the distal one-third of the ring-finger metacarpal bone were each removed; a rather large V-shaped incision being made on the dorsum for that purpose and the redundant tissues cut away, so that when the parts were healed the hand appeared as shown in Figure 10, with no palmar cicatrix.

Case 16. Railway brakeman. Hand crushed in making a coupling, the ring-finger being the only one which escaped total destruction. In amputating the little finger the distal two-thirds of its metacarpal bone was removed as detailed in Case 10 (q. v.); the index- and middle fingers were removed after the method explained in Case 11 (q. v.).

In the case of quite a few workmen who used tools where the width of the grasp was important, and which width would have been compromised by removing any portion of the middle-finger metacarpal bone, that bone has been left undisturbed except for trimming away the palmar knobs of its head and cutting away the articular cartilage.

Case 17. Molder. In handling some heavy cast-iron cog-wheels, one of them fell upon his hand, crushing the index-, ring- and little fingers, the middle finger escaping unharmed by slipping in between two cogs. In this individual case the man's wages depended upon his ability to lift and handle heavy castings, so the escape of his middle finger was fortunate, that finger being the strongest of the digits. To enhance its strength, or rather not to detract from it, the tendons leading to the amputated fingers were diverted inward and sutured to those leading to the middle finger; a procedure which may not have accomplished any direct benefit but which certainly obviated a waste of energy by preventing the attachment of the tendon ends in a mass of cicatricial or muscular tissues, which would naturally have occurred under the ordinary conditions of healing. Aside from this disposition of the tendons, the amputations were performed as detailed in Cases 10 and 11 (q. v.).

Case 18. Farmer. In working around a threshing machine, his hand was caught in the revolving cog-wheels and the index-, middle, ring- and little fingers were "ground to a pulp." An examination of the hand showed that about half of each first phalanx could be saved, which was accordingly done. Like a great many others of his kind, this man looks upon a prosthetic appliance as an expensive luxury, more of cosmetic than practical value, and refuses to invest in any such paraphernalia. When last seen, some six years after the accident, he was able to handle garden tools, hay-fork, etc., and can milk the cows and do quite a number of similar chores which usually would be considered beyond his ability.

Case 19. Clerk. This man suffered for two or three weeks with a "felon" on the tip of the thumb, which, through the "kindly" treatment of several pernicious friends, had resulted in a necrosis of the bone of the second phalanx and the formation of several sinuses, or "pipes," leading to the suppurative center. The joint between the first and second phalanges was destroyed and there was some doubt as to whether or not the latter bone was infected.

The finger was thoroughly cleansed in cyanide of mercury solution, then held for a few minutes in iodized gasolin, dried by evaporation and wrapped in a thick hot kaolin poultice. This treatment was repeated daily for several days until full antiphlogistic effect was secured, at which time an incision was made, the object of this being to remove the bone without a palmar or lateral cicatrix, to preserve the nail, and to foreshorten the thumb as little as possible. The retention of the nail in a measure maintained the rigidity of the parts, which was greatly reduced by the removal of the bone.

Case 20. Buzz-sawyer. In feeding a small piece of board to the saw, he neglected to take his hand away from the saw and as a result the saw cut away a portion of the thumb "on the bias" with a long palmar stump. The typical operation in this case would have been to cut off the point of the bone far enough back to permit of folding the palmar tissues over, thus securing a palmar flap at the expense of bone tissues only, but at the same time shortening the thumb considerably.

To obviate part of this shortening, in this particular case the remnant of bone was cut through to the periosteum, broken gently and folded back upon itself so as to bring the two sawn surfaces together and giving the bone a rounded stump end. Next a flap of skin with subcutaneous tissues was dissected from the radial side of the back of the hand and sutured in place over the proximal two-thirds of the cut surface on the thumb; the distal third of the cut thumb was folded over so as to cover a portion of the skin flap; this covered portion was shaved of its epithelium and the folded-over distal third of the thumb sutured in place, this interplacing of the skin flap creating a better cushion for the covering of the bone and helping to secure healing without unduly shortening the thumb.

The defect resulting from the dissecting away of the grafted skin was subsequently closed by loosening up the surrounding skin and drawing the edges together, an easily accomplished act because of the natural looseness and elasticity of the skin in that locality. Strict antisepsis was observed, and thanks to the good blood supply of the parts concerned, good union was secured and eventually a serviceable thumb resulted.

Case 21. Railroad brakeman. While running alongside of a moving train the man stumbled and fell with one hand across the rail, the thumb and metacarpal being mashed. It was apparent that the best thing that was to be done was to secure a stump which could be utilized as the basis of a prosthetic appliance. With this end in view the thumb was patched up, to save as much as possible, and the metacarpus was trimmed so as to bring the scar on the dorsal aspect, a procedure which necessitated the cutting of the bones well back and the sacrifice of a small portion of the dorsal soft parts. This gave a stump with quite a little movement; when well seasoned an appliance with claw-like fingers was fitted to it so that the man could thereby grasp and hold a variety of tools and large objects. For Sundays and dress occasions he wore a regulation rubber hand, as described in the works on prosthetics.

Case 22. Lawyer. While telling the story of the big wolf that escaped he neglected to remove his hand from over the muzzle of his shotgun; a sympathetic dog sprung the trigger and a load of buckshot tore away all of the hand but the hypothenar eminence. The shredded remnants were shaped and the hypothenar tissues formed into a flap to cover the carpal stump. Good union was secured, and today, when this man tells his story of the big wolf hunt, his listeners cannot help but admire the beautiful artificial hand with which he gesticulates.

Case 23. Railway brakeman. In carelessly making a coupling his hand was caught and the entire hand from the wrist

down was mashed. After thirty-six hours of hot-water treatment it became apparent that none of the crushed tissues were going to survive their injury, so the hand was amputated through the carpus. The bones were cut off far enough back to permit of a palmar flap being secured, which, with some shreds from the thumb and dorsum, made quite a good covering for the stump. In cutting the bones, care was exercised to preserve intact the periosteum of the portions cut away and this was utilized in covering the sawn ends of the bones.

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[For explanation of the pictures shown this month see Dr. Perry's article in the November number of CLINICAL MEDICINE.—ED.]

Symptomatic Treatment of Pulmonary Consumption

By WILLIAM F. WAUGH, A. M., M. D.
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CREOSOTE, as also its derivatives, recommended as germicides, must be given to saturate the system, and hence is useful only with those who can take large quantities with impunity. The best example of massive dosing with this drug was the case of a woman who in time acquired the complexion and odor of a smoked ham.

Gold iodide has been deserted by Shurley and Gibbes, its introducers.

Calomel certainly is useful, in that it clears and disinfects the bowels—urged as a specific probably only by those who fail to appreciate the exceeding value of its true action.

Helenin checks mucous secretion, but further than that is not known to exert any influence to justify the ancient repute of elecampane.

Iodine in all forms stimulates absorption and clears the lymphatics and perivascular spaces of debris that hinders the free egress of the phagocytes. It also stimulates the bronchial secretion and must be used with care if there is a tendency to hemoptysis.

Iodoform allays gastric and respiratory irritation, soothes cough, and, being eliminated through the lungs, is believed to exert a slight germicidal power.

Copper phosphate was Luton's suggestion as a specific. Like many others it never was fairly tried out. The antimycotic powers of copper justify a trial.

Potassium cantharidate is another suggestion of unsettled value. Inducing local edema, as it does, could it be utilized?

The cyanide of gold and potassium, mercury cyanide, and mercury thymolacetate, each recommended, and neither proved nor disproved but remaining to distract the attention of the practician who does not like to neglect any possibility for good.

Calcium Sulphide Most Promising

The most promising agent as a bactericide appears to be calcium sulphide. If it is pushed to saturation and thus sustained for two weeks, can the tubercle bacillus survive? It is harmless to the patient, at any rate, and certainly combats the organisms inducing suppuration.

Aconitine is always indicated for the fever, over which it exerts full control without depriving the patient of a single red blood-corpuscle.

Digitalin should always be associated with aconitine; the pair being especially effective in allaying the fever and preventing sweats.

Fever not controllable by aconitine and digitalin always means fecal or bacterial toxemia; or else an extensive invasion of new territory by the bacilli, such as appears in acute or galloping phthisis. Clear the bowels, disinfect them, and apply cold compresses over the abdomen, changed every

minute, for half an hour out of each two hours until the fever falls below 103° F.

Eucalyptol, menthol, myrtol, thymol, all are useful antiseptics for fetid sputa (also for diarrhea), checking a too free flow of respiratory secretions.

Codeine Best for Cough

Codeine is the most effective agent to allay cough when more than needed for clearing the lungs; for fever, flushing and cerebral fulness from overexertion or nervousness; but only to be used occasionally and when other remedies fail, since its use lessens vital resistance. To him who knows codeine there is no place for morphine in the management of consumption.

Creosote checks redundant mucous secretion, corrects fetor of sputa, restrains sweating; in small doses it has been known to relieve the anorexia, dyspepsia, cough and fever that come from gastrointestinal toxins.

Apocynin tones relaxed vascular tension and stimulates lymphatic a sorption of waste.

Aspidospermine is the remedy for dyspnea when of spasmodic type.

Glonoin relaxes respiratory spasm, checks hemorrhage, and relieves cerebral anemia and its consequence—syncope.

Calcium lactophosphate is the remedy for colliquative sweating, diarrhea, bronchorrhea, and hemorrhages, acting by restoring strength to fragile vessel-walls. It acts slowly, and should be administered for months in full doses.

Macrotin palliates cough, improves the appetite, tends to cure bronchitis, relieves nervous phenomena, and steadies the heart.

Arsenic and Its Combinations

Burggraeve believed that persons saturated with arsenic were impervious to attacks of tuberculosis. It is certain that arsenic may protect the red blood-corpuscles from the attack of other maladies as well as of malaria.

Arsenous acid in small doses corrects gastric and intestinal irritations and improves the digestion.

Arsenic iodide is a powerful stimulant of the absorbents, and useful whenever debris encumber the tissues and impedes the leukocytes.

Quinine arsenate is especially useful as a tonic when fever or hectic is present.

Iron arsenate is a good hematic tonic when fever is absent. It is well tolerated when other chalybeates are not.

Strychnine arsenate is a very valuable stimulant tonic, energizing any other remedy given simultaneously, especially in asthenic febrile states in connection with aconitine and digitalin.

Barium chloride has been warmly recommended in the cheesy forms of phthisis, and as a heart tonic.

Sanguinarine is *the* remedy when secretions accumulate, the sensibility of the pulmonary tissues is dulled, and the patient must cough harder to clear out the retained sputa. It is tonic to the pulmonary tissues and also promotes the appetite.

Corrosive sublimate in minute doses is an excellent remedy for the diarrheas of the tuberculous.

Emetin is the most effective remedy to loosen dry coughs, start up digestive secretions, and to aid in checking fever and hemorrhages.

Atropine is the one only remedy for pulmonary hemorrhages, surely stopping every form, except that due to erosion of a large artery by rapidly advancing ulceration.

Cactin is useful for irregular heart action, relaxes vascular and emotional tension, and had a reputation for checking hemorrhage long before its power of relaxing vascular tension was known.

Cannabis is an efficient sedative for cough, and is preferable to all opiates as it does not disorder digestion or lock up toxins in the system.

Euonymin is a useful cholagog and laxative, stimulating digestive secretions without weakening.

Juglandin is a laxative tonic closely resembling rhubarb. It stimulates all the digestive secretions and tones the intestinal musculature.

Iron iodide is sometimes indicated for the strumous anemic pretuberculous.

For Diarrhea in the Tuberculous

Colliquative diarrheas are checked quickly by atropine, doing service until calcium

lactophosphate has had time to strengthen the cell-walls.

Copper sulphocarbolate is worth a trial for diarrheas and gastrointestinal mycoses.

Calcium sulphocarbolate is the remedy to disinfect the bowel after emptying it of its putrid contents.

Most "tuberculous" diarrheas disappear promptly when the bowel is emptied and calcium sulphocarbolate is then given, say, 40 grains a day.

Real tuberculous diarrheas are quickly relieved by cotoin—which helps in no other form of diarrhea.

The oxides of silver and of zinc are useful for chronic diarrheas with relaxation or ulceration, also for all colliquative discharges.

Most former remedies for diarrhea have fallen into disuse since zinc sulphocarbolate has come into general use.

Lycopin is believed to control pulmonary hemorrhages by directly stimulating the vasocontractors of the pulmonary circulation, for early hemoptysis, cough, sweating, diarrhea, and anorexia.

Benzoic acid corrects fetid sputa, checking redundant expectoration.

Iodized calcium is of value in strumous cases and to check beginning acute catarrhal attacks; also to relax spasm and allay croupal intercurrents.

Treatment of Night Sweats

Picrotoxin checks sweats and is useful for the laryngeal implication.

Agaricin stands at the head of remedies for night sweats, after the bowels have been cleansed and the fever is under control.

Hydrastine contracts the smaller blood-vessels and is useful for hemoptysis, besides being a fine intestinal tonic.

Atropine is the quickest and surest remedy for hemorrhage or for sweating. Full doses are required.

Euarol, used with an oil atomizer, is very useful in clearing out the pulmonary tract, relieving irritation, and temporarily protecting the sensitive tissues against cold and dust.

Nuclein, intravenously or subcutaneously, is one of the most promising remedies for pulmonary phthisis now before the profession.

The symptomatic treatment means the use of exactly the right remedy for every symptom that calls for treatment, at the right time, pushed to the right point.

A proper regimen—adjustment of climate, exposure, exercise, diet, rest, recreation, clothing when combined with the proper symptomatic treatment, affords results that would not have been thought possible a few years ago.

Every case requires individual study. There will never be found a "specific" for tuberculosis, applicable alike to all cases and not requiring, in aid, additional treatment.

The care of a physician who understands the patient is worth more than any climate or system of treatment.

IT is about time that the medical profession gave more attention to the "flowers and fruits in the garden" and less to the "weeds." Hypercriticism, denunciation and ill-gendered feelings have warped us, injured us, and held us back long enough. We must grow more kind to each other, more tolerant of each other's mistakes, shortcomings and frailties, and present a more tangible brotherhood, or the common foes of scientific medicine—ignorance, charlantry and faddism—will invade in still greater hordes the field that legimately belongs to us.

—American Medicine

"Confessions of a Booze Fighter"

By DAVID GIBSON, Cleveland, Ohio

EDITORIAL NOTE.—David Gibson is not a physician, but a former newspaper writer who attracted national attention some four years ago by his very human treatment of certain social and economic questions, in a little advertising magazine of his own. This magazine has developed into a series of "house organs", all under Mr. Gibson's charge. In these magazines Mr. Gibson preaches business honesty—the same ethics in commerce that is demanded within the medical profession. His philosophy is well expressed in the following epigram: "What we need is less complex cure-alls and more common honesty." Mr. Gibson also finds time to write the material for "The Neighbor", a little magazine issued to employer and employed, from which this article is reprinted, with his consent.

THIS temperance wave that has been rolling over the country in the past few years is economical rather than moral.

It is intellectual rather than emotional.

Obviously the emotionalists, the long-haired men and short-haired women, who are in it as a matter of morals, have undoubtedly helped some but by comparison with the economist, the intellectual, they are a good deal like the fly on the elephant's neck who had just pulled a load of mahogany logs up a hill, and which exclaimed on reaching the summit: "Well, we've had a long pull!"

When a manufacturer of Muncie, Indiana, whom the writer knows, puts up $40,000 *of his personal funds and hires the best practical politician in the state to vote the town dry, you can be pretty well assured that there is going to be something doing in the way of* 10*-percent dividends very soon.*

When you pay off a bunch of men on Tuesday and ten percent of them do not show up next day, both you and the men soon realize the frightful cost. Not alone the cost of the booze direct, but the fact that it incapacitates men for production.

Take a bunch of tool makers, or a bunch of printers, and the best man among them, the best actual ability is a booze fighter, and his brain and hands are out of commission at a critical time. As a result, a man of really less ability takes his place.

Sober men are taking the places of boozers everywhere, just like the scientific salesman has taken the place of goodfellowship salesman—it is purely a question of economy.

The favorite argument of the "wets" is this: When you close the saloon you open the speak-easy; you close the opportunity for drinking light alcoholic beverages and render only the higher and inferior spirituous liquors available.

This is all true enough, but—

You only open the speak-easy to this generation of drinkers.

With the saloon out of existence, you take the saloon attitude away that educates each generation of drinkers.

The very existence of a saloon is an advertisement to educate drinkers.

Youth is venturesome and curious. They see men drinking and they want to test the effect. The curiosity of ignorance leads many a young person into the habit and disease of drink.

If you print the effect of a certain narcotic in a newspaper, you will have several people trying the drug to see if it is really so.

A saloon is just like any other business in this respect, that it creates business within and by itself. That's why most stores have show-cases and show-windows. A saloon creates business on this same principle, but—*a saloon is not a legitimate business.*

It is a negative rather than a positive influence. *It is destructive rather than productive.*

While the writer has been a teetotaler for a good many years, yet in his time he has helped open a few saloons in the morning and participated at some closings at night, and we will take his case to show how the average boy learns to drink and gets the drink habit.

In a small town the livery stable, where the race-horse touts, swipes and rail-birds gather in winter, is always attractive to a

boy. These become his ideals in a way. He is anxious to enter their good graces, and soon performs little offices for them, the principal one of which is "rushing the can." He says to himself that this stuff must be good, from the way these fellows go at it, and when the can is passed around the stove in the office at the corner of the stable, he takes his turn. He doesn't like it—it's bitter; but still there must be something in it that he has not found, for old John Day, the stable foreman, he gets drunk, and so does Ben Hoey, one of the swipes. After considering that it must be his own fault instead of the beer, he keeps at it until he really likes it.

Then with a few of the other kids he begins to rush the can on his own private account. He hears a big story about all the touts and swipes and livery-stable chambermaids generally getting on a big drunk the night before—how they started in at Charley Polster's saloon and ended up at Pete Snitzel's, and, obviously, the fellow who is telling it was the soberest of the crowd. Then his curiosity is awakened as to the other phase of drinking—the effect. He gets out with the kids some night and drinks as much as he can conveniently hold, and acts a good deal more drunk than he really is.

Then he hears stories about capacity drinking—of Ed. Wurgler, the toughest "bub" about the stable, going to a German party and drinking twenty-five glasses of beer; which number is usually beyond the ability of the average country follower of the track to buy out of season, so he must be favored where it is free. He has no opportunity to try this, neither has he the capacity, but still it remains an ideal of his.

He finds some booze bottles hid around over the stable, drains one or two of them. Doesn't like the stuff, burns his tongue and gags him; but still there must be something about it, or why should men drink it?

A few years roll around, he has changed his environment and for a time his sense grows faster than his appetite. He gets a job in an office, notices that his boss drinks, so does the next man to the boss, and he doesn't see that it is putting them down and out. He drinks occasionally and even gets out in a crowd and gets "tanked" now and again. He is sick next day, and either lays off or gets through work as best he can.

A few more years. He grows and his job grows, and he is drinking more as he earns more. The night "busts" become more frequent, but he has found a way of treating the "next-morning effects" by taking an early "bracer"—before breakfast.

Here at this point the nerve-tissues are fast becoming destroyed. There is a constant craving for a stimulant. He, in time, becomes a steady drinker, with a route of about so many saloons at certain times in the day and goes around smelling like a gas leak. Or according to nerve-temper, he may become a periodical drinker—where he must lay off for a week and simply drinks till his stomach quits. He doesn't quit, his stomach quits.

Obviously, if a man is young when he arrives at this point and his ambitions are stronger than his appetite, there is hope for him. By having a talk with himself, changing his line of work, moving off to another environment and changing the whole key of life in which he has been playing, he becomes another man, save in name and body.

These few brief "Confessions of a Booze Fighter" would not be printed if the circulation of this magazine were not among mature men; for if the readers were young they would only serve as curiosity awakeners —as a curiosity alarm-clock. But—

They will serve the purpose of illustrating the fact that one generation of drinkers educates the next.

While you will open the speak-easy by closing the saloon, and all that, yet you do not give it a chance to exist openly and advertise itself openly as in the case of the corner saloon.

Supposing you are not a drinking man. You are down town occasionally at night. You resolve to take the very next car home. In going past a restaurant on the way to your car you observe that it is well lighted, clean and beautifully decorated; people are sitting at the tables eating and you even get a whiff of some of the good things on the bill—possibly there is an orchestra playing.

Now, this restaurant keeper doesn't know what the word psychology means, yet he has

applied the science. He has appealed to your every sense in order to get you into his place—that of thinking, seeing, tasting and hearing. Instead of going directly home, as you had intended, you go in, eat a good meal and spend some of your money.

The same would be true if you were an occasional drinker and this restaurant were a saloon.

A saloonkeeper is a merchant the same as a restaurant keeper or any other storekeeper, and he seeks and creates business in the same way.

The saloonkeeper is more frequently a decent fellow than otherwise; attracting and creating business becomes second nature to him, as in the case of the rest of us. Like us, he knows his business perfectly in relation to itself, but the saloonkeeper does not know that his institution is a menace to other industries and commercial pursuits; because he appeals to a weakness rather than a strength.

The saloonkeeper is individually not to blame; for he is there in the supply of a demand, and he is voted out of business and his property practically confiscated, just as in the case of the slaves of the South. While slave trade was an unscientific business, as the saloon business is unscientific, unnatural, yet it is all the business they have, and there should be some way of compensating the loss.

The temperance wave that has been going over this country is just the tendency to the efficient adjustment of industry and commerce and is the result of straight, scientific thinking.

That there is less drinking among men can be seen everywhere. Down in New York City there is a noon-lunch club on the top floor of the Postal Telegraph Building, opposite City Hall Park, known as the Hardware Club. It is patronized by the business men in the jobbing and other trades in that section of the city. Ten years ago if you would look around over the big dining room, seating possibly two hundred persons, you could have seen a highball at every plate. The other day the writer was in there at the noon hour and there were not six drinks in the room.

Most of the table glassware of the country is sold to jobbers and big retailers by the manufacturers holding an exhibit twice a year at Pittsburg, and all the buyers in the trade gather there at these times. Most of the furniture is sold in the same way by the manufacturers holding exhibits at Grand Rapids, Michigan. Each one of these meetings meant a big drunk a few years ago. There was a portable bar in every booth, and salesmanship depended upon a man's capacity to carry a load. But this s no more. The exhibits are still held, but all the tank salesmen are either dead or out of business or quit drinking. The goods are sold purely on merit, and drinking among the buyers and sellers is the exception.

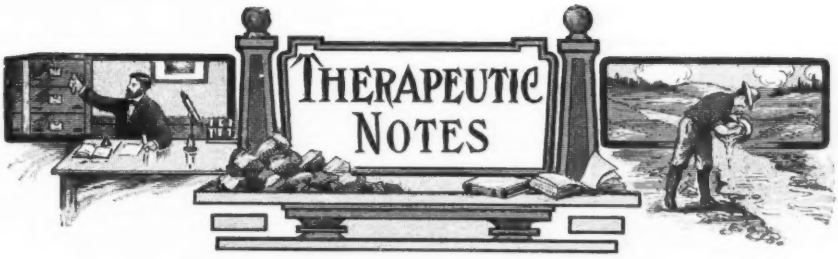
The fact that alcohol has no internal value to man has been scientifically proven. It isn't even a stimulant—it is paralyzing in its effect.

Some months ago, at Johns Hopkins University in Baltimore, a test was made by taking ten men in a normal state and having them do small examples in arithmetic, at finding a certain word in a dictionary, and other minor mental feats. An accurate account was kept of the time required by each individual of the ten, and which was afterward averaged. Then each was given an ounce of whisky and the same examples of a like character to do. After a long series of average tests it was found that under the effects of alcohol in the system the speed was not only reduced, but the error account increased.

This all goes to show that while drinking may not always get a man down, yet it is a negative quality which is keeping him stationary.

There may be successful men who are heavy drinkers; yet they are successful in spite of it rather than by reason of it. The men who can drink and be successful are so rare in strength of character as to make them an unsafe precedent in considering the average man.

It isn't the actual cost of booze itself, but rather its cost in rendering men less efficient to produce, and this is not a moral consideration.



TANNIN FOR DISINFECTING THE HANDS

A novel method of disinfecting the hands, recommended by Zablondovsky of Moscow (see *Therapeutic Medicine*, June, 1910) is to rub them well with sterilized gauze soaked in a 5-percent solution of tannic acid in alcohol. It is said that it makes no difference whether the hands be previously washed with soap or whether they are wet or dry. The disinfection remains effective for some time, and is not altered by contact with liquids nor by movements or friction. After application of this solution to the hands they become smooth and soft, as if they had been polished.

This method has the advantages of being cheap, simple, very effective, and the materials are always at hand. It is especially adapted for emergency work. While seemingly almost too simple to be effective, yet, the method has been tried out by Dr. Biehn in our own laboratory and bacteriologic tests made by him confirm the claims. Cultures taken from the hands five minutes after disinfection were found to be still sterile.

FORMIN USEFUL IN "RUNNING" EARS

Dr. W. M. Barton has discovered that hexamethylenetetramin (formin or urotropin) is excreted by the middle-ear. This fact has been taken advantage of clinically at the Children's Clinic at Georgetown University Hospital, Washington, in the treatment of about a score of children suffering from chronic ear infections; good results having been obtained in all of the cases. One child which had an offensive discharge from the ear for about a year, and had been treated in the usual way by irrigations, etc., without benefit, was given formin, and in a short time the child was apparently cured. We commend this suggestion to the readers of CLINICAL MEDICINE. Try it out and report.

EFFECT OF STROPHANTHIN ON BLOOD PRESSURE?

Recent investigations by Straub, published in the *Therapeutische Monatshefte*, seems to indicate that strophanthus, unlike digitalis, does not increase the blood pressure. According to Bailey, crystalline strophanthin is a valuable cardiac stimulant when compensation is broken from any cardiac disease, but it is not suited for continuous use and should be reserved for emergencies. He advises that it be given intramuscularly or intravenously, dissolved in salt solution.

MAGNESIUM-SULPHATE INJECTIONS IN TETANUS

L. Phillips (Proc. Royal Soc. Med., Feb., 1910, through *The Prescriber*, Aug., 1910, No. 47) treated seven cases of tetanus by means of intraspinal injections of magnesium sulphate, four of whom recovered and three died. The following is the technic:

A 25-percent solution of the salt is carefully sterilized and injected into the lumbar region in the ordinary way, first allowing a little cerebrospinal fluid to escape. One cubic centimeter of the solution is injected for every 25 pounds of body-weight: which means about 5 to 6 Cc. for an adult, and 2 to 3 Cc. for a child. It is as well to prop the patient up to prevent extension of the fluid to the medulla, and consequent respiratory failure.

The result of the injection generally is flaccidity of the lower limbs and of the abdominal muscles, and often slight diminution of the trismus, the patient feeling more comfortable, and sleep also often ensuing. In acute cases the injection may be repeated in twenty-four hours, but the interval depends largely on the return or otherwise of the spasms. Details are given of the cases and a résumé of the literature on the subject is appended. Further reference will be found in *The Prescriber*, 1910, p. 90.

INJURIOUS EFFECT OF PHYSIOLOGIC SALT SOLUTION

The assertion of Roessle that physiologic salt solution is by no means an entirely indifferent fluid for the tissues of the body caused Hans Hoessli (*Ther. Monatsh.*, Aug., 1910) to institute experiments of his own.

Hoessli injected into the peritoneal cavity of cavies salt solutions of from 0.9 to 0.92 percent strength, of a temperature of 38° to 40° C. The amounts injected were from one-eighth to one-sixth of the body-weight of the animals. After six or seven hours fats and lipoid globules may be seen in the cells of heart and kidneys. These alterations in the cells obtain their maximum within twenty-four hours and have disappeared after forty-eight hours. The essential effect of the solution appears to be produced by the sodium ions.

INFLUENCE OF GELATIN ON THE COAGULABILITY OF BLOOD

J. Renar (review in *Ther. Monatsh.*, Aug., 1910) puts the blame for the many contradictory reports concerning the therapeutic importance and value of gelatin upon the occasional employment of improper specimens of gelatin, and especially the fact that they are frequently overheated.

Renar finds that the coagulability of the blood invariably is increased by intravenous injections of gelatin. The percentage in the blood of calcium salts and of fibrinogen shows no definite changes. The fibrinferment content continues augmented for a considerable period. Immediately after the injection the number of white blood-cells is strikingly reduced, this, in many cases, being soon followed by a hyperleukocytosis.

VARIABILITY OF DIGITALIS

Edmunds and Hale ("Bulletin No. 48" of the U. S. Hygienic Laboratory) have made a careful study of different liquid preparations of digitalis as found in commerce, employing a biologic method of assay, the frog mainly being the test-animal. They found a wide variation in the strength of these preparations, stating that a difference of as much as 400 percent may be expected at times in different specimens of the drug. Need we moralize?

INTRAVENOUS INJECTIONS OF MAGNESIUM SULPHATE IN PUERPERAL INFECTION

Dr. R. R. Huggins (*Surgery, Gynecology and Obstetrics*, June, 1910) says that for some months he has been using magnesium sulphate in the treatment of puerperal infections. Experiments both with animals and on man have demonstrated, he says, that the administration, intravenously, of this salt is safe and that it is a valuable therapeutic agent in the treatment of infection when given in this manner.

When indicated, this treatment is supplemented by a continuous intrauterine irrigation of a solution of the same salt. The author describes a case of puerperal bacteremia after abortion, which was treated successfully by this method.

MAGNESIUM SALTS IN THYROID INSUFFICIENCY

Corrado of Genoa (review in *Therap. Monatsh.*, July, 1910) has attempted to discover means for overcoming the danger of tetanus after thyroidectomy. In his experiments on thyroidectomized dogs he injected isomeric solutions of magnesium sulphate and of magnesium chloride in large doses, giving 0.5 to 2.0 Grams of the drugs per kilogram-weight subcutaneously. By this method he succeeded in removing even the most severe tetanic conditions in the animals, which survived the operation longer than the

untreated thyroidectomized animals, while they appeared to be insensible to the toxic effects of the magnesium salts.

The therapeutic value of magnesium in this condition consists, then, in suppressing remarkably the attacks of tetanus, in influencing favorably the tetanic symptoms, and in securing a favorable course of the affection. Even though the animals finally perish, the magnesium salts have proved a valuable means of tiding over the critical period of thyroid insufficiency until the remaining parathyroids can function or until in other ways the trouble can be controlled.

This is only one of the many instances where animal experimentation, which is now so vilified, has proved of inestimable value in enabling us to save lives which would otherwise be doomed.

REPORTING CASES: A SUGGESTION

The editor of *The Medical Times* suggests that many cases offering valuable clinical lessons are not reported because the experiences separately are scattered among many men. If we could arrange, he says further, with groups of observers to collate their experience in similar cases, we could profit by the results of these collective observations. It might be a good idea if groups of physicians were to organize to collate cases of special diseases, deciding the chief points to be noted in their clinical reports. In this way statistics of considerable value could be created.

SUGAR AS A CORRECTIVE IN PRESCRIPTIONS

L. Sabbatani (review in *Ther. Monatsh.*, July, 1910) has determined experimentally that sugar increases considerably the internal friction in fluids and therefore interferes with the molecular motion in the same, thus retarding and even impeding the occurrence of many reactions.

The author has examined particularly the impeding effect of sugar upon coagulation of albumen and shows that the viscosity of syrup may also influence the action of medicines. Sugar is especially useful in diminishing the irritating or caustic action of many remedies. Gum arabic, salep and other mucilaginous substances have the same effect, but sugar is preferable in that it tastes better and also is borne better.

GALEGOL AS A GALACTAGOG

Dr. Scherer of Prague (review in *Ther. Monatsh.*, July, 1910) has found that galegol, an extract of galega officinalis, administered to nursing women, a teaspoonful in four ounces of milk three times a day, has proved a reliable, harmless remedy to increase the secretion of milk. He used it, with satisfactory results, in sixty cases.

ALTERNATION OF CATHARTICS

According to a writer in *The Medical Summary* (July, 1910), no one particular cathartic should be continued for any prolonged period. The intestinal tract, in time, grows habituated to a given stimulus, with a resulting lack of tone. Nerve obtundity ensues and the drug must be run up in ever-increasing doses. It is bad practice to continue indefinitely medicines containing aloes, which latter exerts its effects upon the lower intestine. Strychnine acts upon the muscular structure of the intestines and in time its beneficial effects are lost. Salines act on the mucous membranes, increasing the watery constituent, thus favoring loose stools. Castor oil acts somewhat in the same way, besides dissolving scybala. Calomel increases peristalsis by acting upon the glands of the intestines and by irritating the mucosa.

Thus it is evident, the writer continues, that there should be a judicious rotation of cathartic medication if such remedies must be employed at all. The only exception to this rule are the cascara products. Cascara, so far, is about the only drug agency known that has any semblance of curing chronic constipation.

PHOSPHORUS AND COD LIVER OIL IN RICKETS

Dr. J. A. Schabad claims to have demonstrated (*Therapeutic Medicine*, June, 1910) that phosphorus alone is not beneficial in

rachitis, but, on the contrary, injurious. Oil of sesame, which has been recommended as a substitute for codliver oil, has no value. The best combination is a solution of phosphorus in codliver oil. In this the author corroborates Kassovitz's clinical findings. Why this combination should operate better than codliver oil alone, bearing in mind that phosphorus alone is injurious, has not been explained, but such seems to be the fact.

CAMPHORIC ACID FOR THE SWEATS OF TUBERCULOSIS

E. Levi (*Gaz. degli. Ospedali*, through *J. A. M. A.*) reports twenty cases to demonstrate the effic cy of camphoric acid in the treatment of the sweats in phthisis. He gives 2 Grams (30 grains) in two doses during the day or evening, and has found it effectual when all other measures had failed to relieve. The sweats are due, probably, to a number of factors acting on the centers of respiration and transpiration, and the camphoric acid seems to influence both, being at the same time well borne and causing no toxic symptoms. He kept up this treatment until the sweats d sappeared.

Dr. Levi further states that camphorated alcohol rubbed into the skin also is useful in aiding the effect of other drugs, but much less than the camphoric acid given as above.

PHARMACOLOGY AND THE CLINIC

The importance of regulating the dose of drugs according to clinical condition is aptly discussed in an editorial, which appeared in the August number of *The Journal of the American Medical Association*. Thus, the writer says that the fact that clinicians sometimes fail to obtain, at the bedside, results which laboratory observations might lead them to expect has been attributed to the difference in the behavior of drugs in the normal and diseased organism. Both pathology and pharmacology teach that, in many instances, this difference in reaction of a given organism, when not associated with actual destructive changes, is a mere matter of variation in irritability.

The problem of treatment, then, becomes a matter of dosage. In a case of intestinal colic, in which the clinician was inclined to condemn the use of the usual 1-milligram (gr. 1-67) dose of atropine because of the development of toxic symptoms, the dose was reduced to the unusually minute amount of 1-2 of a milligram (gr. 1-134). In this manner not only were the toxic symptoms eliminated but the desired therapeutic result was obtained. Just as in lead-poisoning the presence of the lead renders the intestine so much more irritable that a given dose of atropine that would have very little demonstrable effect on the normal intestine can relieve the symptoms, so here, the intestine has been rendered so irritable as to react to a minute dose.

PANTOPON AND THE MORPHINE-HABIT

In a letter to *The Lancet* Oscar Jennings speaks of a preparation recently introduced in France known as pantopon. This represents the totality of the alkaloids of opium without the inert ingredients. Dr. Jennings suggests that an important step in the treatment of the morphine-habit is the substitution of this pantopon for morphine itself. The next step is the use of a pantopon from which the morphine has been removed, and the third, one in which all of the alkaloids are eliminated except those constituting the meconar ic group. In this way opium itself is made the agent for the liberation of its victim from his bondage.

GELATIN IN DIARRHEA

Weil, Lumière and Pehn claim that the diarrhea in infants yields more rapidly and safely to gelatin than to preparations of bismuth or tannin. They gave gelatin by mouth. Von Aldor, who cites them (*Therap. Monatsh.*, April, 1910), recommends high enemas of a 10-percent gelatin solution in Carlsbad water.

But why all this trouble? Members of the "family" know that the simplest, most rational way to treat diarrhea in infants is (1) to clean the bowel out thoroughly, if necessary using colonic lavage, as well as suitable laxatives, and (2) to administer the intestinal antiseptics.

The Need of Studying Senility

VI

Why then do living beings die?

You have read with interest the historic exposition which Sabatier gives of the question in the pages of his book, from which I have borrowed already. I shall try to give you a resumé of this author's opinions, which appear to give a satisfactory explanation of senescence and death.

Living matter, taken in its greatest simplicity, shows its vitality in its strong power of allurement (attraction), which assures a constant and proportioned repair in the living mass. It has but a restricted field in which to manifest its existence, its power of allurement and its instability. But when we have to consider this living matter as having acquired by a differentiation from the mass a little higher degree of perfection the relations become changed. All differentiation and all specialization of living matter determine, as a first result, the moving away from the primitive type and a modification of the primary functions. With a higher quality of function there must be a less quantity of functional power, and, continuing in the domain of biology, we find, also, that the quality of the vital power is in inverse ratio to the quantity of the function, so that the energies are so much the more intense in proportion as they are less differentiated.

It may be conceived that potential immortality might have existed in the world. It was vested not in the protoplasm which we know today but in primitive protoplasm. This protoplasm could, as Haeckel would have it, present such a lack of differentiation that it would have neither form nor limitation of dimensions. This is the primitive jelly of Oken. The first step in specialization is made when this jelly fragmentizes itself, while still remaining homogenous. Furthermore, the intimate structure of these fragments holds in reserve two quite distinct classes of beings, unicellular beings and beings of many cells, or metazoan. Differentiation in the first class is accomplished by means of a nucleus, and the nucleus which varies most from the form of primitive life is just the one whose decadence shows itself first.

In the metazoans difference in form is observed at the beginning; some cells differentiate utterly, form diverse tissues and die; while other cells maintain, as Sabatier expresses it, "a conservative silence;" they remain the same that they were before and preserve intact their power of alluring which enables them to perpetuate themselves. These are the reproducing cells. These reproducing cells were already foreseen by Weissmann; however, he could not explain them satisfactorily. Buetschli essayed to do so, finding that the infusoria on the road of decadence are able to regain new powers—may be said, in a word, to rejuvenate themselves by the phenomenon to which the name conjugation was given. Buetschli argues that the fecundation of the metazoans is of the same order, thus the egg, the reproductive female-cell, the only one capable of rejuvenation, is revitalized by the spermatozoid, the reproductive male cell, the only one capable of rejuvenating it. These ideas have been reinvested with scientific precision by the labors of Koehler in the *Revue Gen. des Sciences*, August, 1892. We shall

have a further proof of the part which differentiation plays in the evolution of primitive connective tissue.

We see therefore that the more the elements differentiate themselves with the purpose of constituting so many isolated individuals within one individual, in order to have a better-determined specialization, so much the more does the *power* of the elements diminish, because they can no longer live on themselves and must needs depend for sustenance on the collectivity to which they belong. The elements find, therefore, that their *instability* and their *power of alluring*, these two primordial characteristics of living matter, have diminished; they are in a state of general inferiority on this account; they have become mechanisms, and like every mechanism they become exhausted and are worn out by their own functionizing; and so they are condemned to senescence and death. Read in this respect the memoirs of Delboeuf, "La Matiere Brute et la Matiere Vivante ("Crude Matter and Living Matter") and you will see how this author sustains this theory of senescence and death by differentiation and specialization of functions—which might be termed "the physiologic theory." In another more recent memoir the same author, Delboeuf, in the *Revue Philosoph.*, 1891, under the title "Pourquoi Mourons-Nous?" (Why do we die?) discards his former theory and falls back on pure philosophy.

However, you may find satisfactory enough teaching in this likeness to a machine that wears itself out—yet this is the most current explanation of senility. Is it sufficient? Is it not necessary to dig somewhat deeper into the problem? Looking more closely at this explanation it does not give more than a part of the solution we are in search of. For though we may readily admit that differentiation is accompanied by a diminution of alluring power and hence by a diminution of resisting power, and if the complication of a mechanism does involve fragility, yet are we obliged to acknowledge that alongside with the machine that uses itself up there is also the machine that is made for the purpose of repair, and we are in search of an explanation of the reason why the repair of parts that are liable to crumble and be annihilated is made so very incompletely.

That explanation might possibly be found sooner in a differentiation that is pushed to its extreme limit, rather than in the idea of wear and tear by the work of functionizing. So long as differentiation in the living matter was but feeble so long did the non-differentiated part conserve sufficiently its alluring power for the repair of the losses sustained in the work of differentiation. But little by little the cell lost its general function and has become a special agent and more and more a cell of a specially determinated function, as a nerve cell or a muscle cell, and the like. At every step in the perfecting of specialization the cell loses a part of its reparative power because it loses more and more of its alluring power, so that when it arrives at the highest degree of differentiation there is almost nothing left of its primitive element. So it is then when a localized traumatism occurs the lacerated elements of the affected parts have not power enough to reconstruct themselves and the result is the formation of a cicatrix. This is what we observe in nerve centers: When there happens to be a rent there the nerve cell, which is very much differentiated compared with its primitive element, is no longer able to produce its own nerve tissue and connective tissue must replace it.

Now you know that connective tissue is made up of elements that have no very definite characteristics. This is a less differentiated tissue, but it is at the same time a tissue that presents a higher power of alluring (attracting), and it is on this account that in the cicatrix it replaces tissues that are highly differentiated and incapable of regenerating themselves. For the reason that connective tissue is less differentiated we see it taking little by little the place of noble cells which were used up in their functioning or which were put out of condition accidentally, in consequence of their special adaptation. It is to this observed biologic fact that we shall revert and upon this we shall rely when we come to study together the anatomic modifications which senility presents to our notice. This evolution of connective tissue justifies Charcot's phrase in the first of his lectures on the "Diseases of Old Age"

(Charcot, "Maladies des Vieillards"), where he says: "The changes of texture which old age impresses on the organism show themselves at times to such a degree that the physiological and the pathological states resemble each other so much that they may be confounded because of their insensible transitions, and it becomes impossible to distinguish them clearly."

Such are the facts which I recall briefly in order to answer the double question: How does living matter die, and when does it die? It dies in consequence of its differentiation and its specialization, which have the effect of displacing its two fundamental properties, i. e., its alluring power and instability, by a specialized functioning. It dies then when its power of alluring is so enfeebled that its differentiated, specialized elements have exhausted their coefficient of resistance, which is not illimitable because the differentiated element is unable to remake or regenerate itself. Senescence is precisely the period during which the element lives on its reserve fund; it begins from the time when the element has arrived at the highest degree of differentiation, and ends the moment when it no longer is sufficient for itself.

These general biologic notions we have to apply in the study of the human being who presents us a precise type of a highly organized individual in a very advanced state of differentiation.

Let us extend now the idea of alluring power and let us apply it to every one of the organs that constitute the organism.

The cells in the first days of their embryonic life, when they are hardly yet differentiated, enjoy to a high degree alluring power and instability. But, little by little, differentiations are established and specializations develop. At the same time, and proportionately, there is to be noticed a loss of instability and a diminution of the alluring power, and very soon definite cell groupings take place. The cells are no more characterized by intensity of life, but rather by a more limited life, because such a cell has no more to do than exhibit contractility or sensibility or to elaborate this or that secretion, to the exclusion of all other functions. From these groupings are born the nerve centers, the hepatic masses, tissues of narrow life and restrained duration, because they have lost the faculty of self-remaking. The organs have a definite function and for a limited time, because their resistance is proportional to the diminution of their alluring power, which power itself is in inverse proportion to the degree of differentiation. Every organ has therefore its function diminished in intensity as it exhausts its coefficient of resistance, which it possessed at the moment when its differentiation become the most perfect and this coefficient can not be renewed. The totality of these organic losses gives, as a resultant, a diminution of the intensity of functional life, and this is senility.

A second question presents itself here: Senescence and senility being functions of the loss of alluring power and of cell-differentiation they ought then to begin at the same period in every group of cells and in all individuals, and yet they do appear at a different age with every individual. This is certainly because the alluring power is not the same in every individual, but is of variable intensity, and because every organ has acquired during its differentiation a special coefficient of resistance. We know that the protoplasm that we are acquainted with at the present time has not always the same intimate composition. The carbon, the hydrogen, the oxygen and the sulphur enter into it in variable proportions and their chemical differences are sufficient to allow of possible variations in evolution. Who tells us that originally there have not existed divers protoplasms? Here is the reason why we conceive that heredity and congenital diatheses, or those that are acquired during the life of a being, must, because they alter the chemical structure which is the substratum of dynamic life, communicate to the protoplasm a variable power of alluring and also a particular vital resistance. Hence the apparently unexplainable differences of races, families and individuals.

These data will, I trust, have convinced you that senescence and senility are normal phases of life which lead us legitimately to death, as the phase of growth leads to the complete development of the living being. Senilization is therefore made up of different phases which a number of forces pass through

after they have isolated themselves from the great movement of unconscious life by specializing themselves into a definite form for the purpose of furnishing a special and narrow evolution, but a conscious one, and then again eventually to reenter into the general and unconscious movement. Death therefore, properly speaking, and viewed from a high biologic point does not exist. It does exist in reference to the individual and ought to be considered as an ordinary function. So, too, is the picture of death by old age, aside from all moral and physical preconceptions: It is exempt from all sorrow and agony because it does not admit of any pain. It is a progressive diminution and without a sudden blow at once, and at all the organic activities. It is a picture of calmness and of falling asleep, of slow annihilation which does not let the individual even perceive the precise moment when all activity definitely disappears.

It is to this that all our medical efforts should converge: to diminish as much as possible the inequalities in the exhaustion of the various functions, to unify and equalize the wastes of the organs, to render the movements of vital decay and the loss of individuality as imperceptible as possible. This part of the physician's activity has its importance, its utility, its nobleness, and you will find great satisfaction in carrying it out.—From Boy-Teissier's "Maladies Des Vieillards."

INTEGRAL STERILIZATION OF LIQUIDS BY ULTRAVIOLET RAYS

M. Billon-Daguerre had already previously shown to the Academy that liquids can be sterilized by ultraviolet rays. Pursuing his studies further, he found that he could replace the mercury-vapor lamp hitherto used by quartz tubes holding rarified gases, which he illumines by an inductive or static current.—*Gaz. des Hopitaux*, 1909, p. 1626.

DIET IN DIABETES

Le Goff (*Gaz. des Hop.*, 1910, No. 34, p. 476) two years ago called attention to the benefit derived by diabetic patients (as regards diminishing elimination of sugar) from the use of vegetable fats in the form of bread prepared from almonds. He points out that there are many oleaginous seeds that may be used for the same purpose, for instance walnuts, hazelnuts, beech. nuts, poppy seeds, ground-nuts.

In the present communication the author describes the soy bean (soja hispida), which is used extensively as a food in China, and can easily be cultivated in our climate. The soja from Tonkin contains

Fats	12.95% to 14.80%
Proteids	34.85% to 38.41%
Starch	26.74% to 32.11%
Cellulose	3.6% to 6.2%
Mineral matter	4.35% to 5.20%
Water	10.% to 11.30%

The Chinese variety contains 20 percent of fats, 41 percent of proteids, and only 14 percent of carbohydrates.

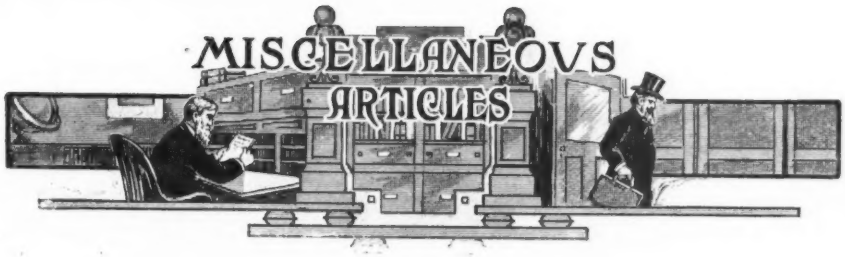
The soy bean can be prepared in a great many different ways and tends materially to improve the nutrition of diabetic patients.

CLEMATIS VITALBA FOR ULCERATION OF VARICOSE VEINS

G. Sieffert of Paris uses clematis vitalba [European virgin-bower. See American Dispensatory] internally, in homeopathic dilution, in ulceration of varicose veins. Externally he employs the same drug as an ointment having the following composition: Tincture of clematis vitalba, 6 parts; lanolin, 20 parts; vasoline, 4 parts.—*Leipzig. Popul. Zeitschr.* f. *Homeop.*, 1910, p. 96; in *Pharmaz.*

THE TREATMENT OF POSTPARTUM HEMORRHAGE

A. W. Ansems (*Nederl. Tijdschr. v. Geneesk.*, 1909, II, through *Muenchen. Med. Woch.*, 1910, No. 15, p. 810) administers 3 Gm. (45 grains) of calcium lactate *pro die*, for from three to fourteen days after confinement, to combat a tendency to hemorrhage, and reports excellent results. A combination of calcium lactate and calcium chloride would probably be even more effective.



Acute Anterior Poliomyelitis

AS stated editorially in the last number of CLINICAL MEDICINE, we have received many requests from our readers for information concerning acute anterior poliomyelitis, or, as it is commonly known, infantile paralysis.

This disease is widely prevalent throughout the country at the present time. It is epidemic in numerous localities and is attended by an unusually high mortality-rate. While it is generally confined to children, there have been quite a number of reports of the disease attacking adults. Although the number of deaths is relatively small, the paralyses which follow in the wake of these attacks are so general and cause such disability that physicians are naturally anxious to secure all possible information concerning methods of treatment which hold out promise of relief or cure.

In this number of CLINICAL MEDICINE we are printing an article by Dr. Smith J. Townsend of Gilmore, Iowa, which will be read with intense interest. We hope to be able to elicit other contributions from our readers that will throw more light upon the subject, especially upon the *treatment* of infantile paralysis. Concerning its symptomatology, etiology and pathology there is little that is new, aside from Flexner's work, referred to herewith. As an introduction to and basis for discussion the following brief résumé is submitted:

Heretofore it has been merely suspected that acute anterior poliomyelitis was contagious, but now this has been pretty well established as a fact, through the experiments made upon monkeys by Flexner of the Rockefeller Institute. While Dr. Flexner has not actually discovered the organism, he has found that the active agent is a living virus, and this he has transmitted through twenty generations of monkeys. This organism passes through the closest filter without loss of activity. The indications are, therefore, that it belongs to the class of socalled "filterable viruses," and it is so minute that it cannot be revealed even by means of the ultra-microscope.

The period of incubation in monkeys varies from three to thirty days, the average being seven, eight or nine days, though the animals sometimes develop the disease even within three days after inoculation.

Flexner's investigations seem to show that the source of infection, in most cases at least, is the discharge from the mucous membrane of the nose and throat; also that the organism probably reaches the body through the same route. This immediately suggests that an efficient means of preventing the disease is disinfection of the nasal passages with suitable germicidal washes. It should be stated, however, in this connection, that other observers believe that one of the principal routes for infection is the gastrointestinal tract.

The pathologic changes are described in all the textbooks and need not be repeated in detail. House, in a paper published in *Northwest Medicine* for October, 1909, speaks of them as follows:

"Poliomyelitis is not merely a local disease of the anterior portion of the spinal cord, nor even limited to the cord at all. It is a disease due to the presence of a specific agent in the entire body but showing a selective action upon the cord, notably the gray

matter of the anterior horns. The pathology includes congestion and redness of the pia, mottling of the gray matter of the cord, swelling of the cord, especially in the cervical and lumbar enlargements, and tiny hemorrhagic areas in the anterior or occasionally in the posterior horns. These hemorrhagic foci seem to correspond to the ultimate paralyses, i. e., at the hemorrhagic areas only occurs that complete destruction which is productive of permanent palsy.

"The early pathologic changes occurring in the disease are far more extensive in the first stages than the final palsies would indicate. This suggests that there is a control-lesion which is complete and which is surrounded by an area of swelling gradually shading off into healthy tissue, exactly as a boil is surrounded by an inflamed area shading from the necrotic central portion gradually into the healthy tissue around it. And just so does the paralysis indicate that the cord is involved.

"The brain also suffers. In cases recently reported there have been found changes in the brain, especially in the mid-brain, corresponding to those in the cord. This is important, for at the bedside the doubtful cases are those exhibiting a preponderance of cerebral symptoms, such as head pain and unconsciousness. The author has also found it difficult at times to differentiate between cerebral poliomyelitis and tuberculous meningitis because of their similarity quite early in their course; but a few days' observation makes a diagnosis possible."

Several varieties of the disease are described by Dr. H. L. Taylor in the October number of *The Archives of Pediatrics*. He mentions eight, as follows: (1) Spinal poliomyelitis type; (2) ascending or descending palsy; (3) bulbar, or pontine, type; (4) cerebral type; (5) ataxic type; (6) polyneuritic type; (7) meningeal type; (8) abortive type.

The first symptom usually observed in the case of acute anterior poliomyelitis is some distress in the gastrointestinal tract; generally diarrhea, sometimes constipation, and usually abdominal pain. In the mild or moderately severe cases there is slight fever (100°-102° F.); the patient is restless, complains of headache and backache, also of pains in various parts of the body, often described, and occasionally diagnosed, as "rheumatic." After a day or two these symptoms clear up, but there is left behind more or less muscular weakness which generally amounts to actual paralysis, the limbs, especially the legs, being the parts usually affected.

In cases of the more severe type the pain may be very intense, with feeble respiration, rapid heart action, retraction of the head and pain in the neck, the latter especially in the cerebral cases. In cases of the acute ascending type, the paralysis attacks first the extremities, successively involving the bladder, rectum, abdomen, back, chest, and finally the respiratory organs, ending with death.

In the bulbar form the paralysis first attacks the throat, eyes, face, tongue and muscles of swallowing and speaking.

House, who has personally observed thirty-one patients, says that in twenty-four cases there was paralysis of the legs; one case was of the cerebral type; the remaining ones exhibited symptoms of cervical involvement. These three also showed cerebral symptoms. The same author states that the majority of his patients suffered some slight intestinal disorder, with relaxed bowels and abdominal pain. Terriberry, in New York, observed much constipation, and if diarrhea occurred it was secondary. He found the stools offensive and full of scybala.

Both these accounts, although varying slightly, tend to support the theory that the intestinal canal bears an important role in the occurrence of the infection. In the case-histories it often appeared that children had been given castor oil, and appearing better the next day were thought to have recovered. From forty-six to ninety-eight hours later they were found to be unable to move the legs. All had had a rise of temperature to 100° and 101° F. At the time of paralysis all suffered from pain in the affected parts, which was rarely severe, and all had pain in the spine. In most instances in which the lower limbs were involved the patients had some difficulty in passing urine about the third or fourth day.

The mortality-rate is quite high. Late epidemics have averaged from 5 to 20 percent, in some cases being as high as 40 percent; but usually it is not as high. This

disease is most to be dreaded because of the paralysis it leaves behind, from 75 to 90 percent of the recovered victims being usually more or less crippled for life.

The treatment given in the textbooks is scanty and not at all satisfactory.

House says that no prophylactic treatment of any practical value has as yet been discovered. Flexner's findings suggest that in every case the disease might be prevented by careful attention to asepsis of the pharyngeal and nasal mucosa. According to this author, absorption of the virus by the monkey did not occur if the mucous membrane was intact, but it was quite readily introduced into monkeys where there were abrasions of the nasal mucous surfaces. Peroxide of hydrogen, locally, is suggested.

Whenever a case of this disease occurs in a home, in a school or an institution where children are exposed to the infection, a routine examination of the throat and nose should be made; any defects of the mucous membrane should be properly treated at once and mild antiseptic washes (as above suggested) applied. The bowels should be thoroughly cleaned out with small doses of calomel and podophyllin, followed by an effervescent saline laxative and by colonic flushing, no matter whether diarrhea or constipation be present. This not only gets rid of any intestinal irritant but also lowers blood pressure. Elimination by the urinary tract may likewise be favored by the use of alkaline diuretics.

For the control of the febrile symptoms aconitine is probably the best remedy. It should be given in small doses (gr. 1-134, aconitine, Abbott) to lower blood pressure and bring about defervescence. Veratrine is also suggested, and in sthenic cases this may be even more useful than the aconitine, through its decided action as an eliminant. Frequent hot baths aid in the elimination of the toxins and serve to diminish somewhat the spinal congestion. If gelseminine is used, as suggested later, it may replace or be used in association with aconitine or veratrine.

Is there any remedy which will attack directly the morbific cause?

The suggestion of using urotropin (or formin) made by Dr. Townsend in this issue is a logical one. Cushing and Crowe (*Johns Hopkins Medical Bulletin*, April, 1908, and April, 1909) demonstrated that after ingestion this substance is found in the cerebrospinal fluid and there manifests antiseptic properties. This has led to its use as a prophylactic and curative agent in meningeal affections of various kinds by a number of clinical observers.

It must be kept in mind, as House observes, that this disease probably is characterized by a general infection. This being the case, the agents which combat the organisms of infectious diseases generally should be useful, and of these the most valuable are probably echinacea, calcium sulphide and inunctions with colloidal silver. The first two should be given to saturation, in large doses; the last may be well rubbed in along either side of the spine, in lieu of the usual mustard draft, of course avoiding harmful pressure or unnecessary force.

One of our correspondents (his paper will appear next month) got good results, in one case, with chromium sulphate.

For the relief of pain most clinicians recommend the salicylates. Aspirin (acetyl-salicylic acid) naturally suggests itself. If the pain is very severe, small doses of morphine or moderate doses of codeine may be required. The hyoscine-morphine-cactin combination ought to meet this indication admirably. The patient should, of course, be kept absolutely quiet in bed, the spine being protected from pressure. The plaster jacket has been suggested.

To relieve further the tendency to spinal congestion, one Iowa physician who has had considerable experience uses gelsemium. Since this remedy, in small doses, has a spinal-excitant or strychnine-like action, he says that it must be given in full doses to complete physiological effect in order to secure the depressory action upon the cord. He therefore pushes it to the production of ptosis. In place of the tincture of gelsemium we urge the use of the alkaloid gelseminine.

Our eclectic brethren urge adherence to the "specific" method of treatment, i. e., the meeting of every symptom, as it arises, with the drug specifically indicated to combat the symptom-pathology. For instance,

the scarlatinoid rash and the stiffness and soreness and somnolence of one case suggested the use of rhus, bryonia and echinacea. One writer, in *The Eclectic Medical Gleaner*, says that the remedies which deserve special study in this disease are veratrum, aconite, gelsemium and rhus, while bryonia, echinacea, jaborandi and belladonna may also be useful.

For the stage of convalescence most authorities recommend electricity and massage; however, Dr. Henry L. Taylor (*Archives of Pediatrics*) dissents. Most important is normal use of the parts paralyzed, so as to secure proper balance of affected and unaffected muscle-groups. Next in importance he places vibration. Tonics, such as the triple arsenates with nuclein, nerve reconstructives like lecithin, iron and iodine, alone or combined, will naturally suggest themselves during this period.

We shall hope that this brief résumé may excite some discussion. Many of our readers are in a position to give us practical help. A number of short therapeutic articles are particularly desired. Who will volunteer?

INFANTILE PARALYSIS—WITH FULL RECOVERY

Julia H., age 4 years, became sick with vomiting and purging. Mother gave castor oil and then called me. I made a full examination, then prescribed calomel and more oil. The second day the left leg began to pain the child and from this time on the pain in the leg, with a temperature of 100° F., were the only symptoms. Temperature kept up for about five days, during which time patient was kept in bed on a semi-solid diet. The paralysis soon manifested itself and the pain seemed only to appear on movement.

At the solicitation of the father I called in one of Montana's ablest surgeons, who verified my diagnosis, stating that this case was about the tenth he had seen during the year, 1909. He promised the parents full recovery and advised no further treatment than what I was using, i. e., laxatives and intestinal antiseptics. After the fever left I used the faradic current to the leg and the full length of the spine. (At this time, when the patient was brought to my office in a baby buggy, I noticed an unusual odor of the child's skin, even though the mother bathed the child every day.) After three weeks' treatment with the current there had been so much improvement that the little girl could walk around with only a slight limp and after three months this left and the girl was none the worse for the experience.

F. E. McCann.

Augusta, Mont.

[Have other members of the family noted this peculiar odor? Whatever else the doctor may give, the use of laxatives and the intestinal antiseptics is certainly fundamental.—Ed.]

FIVE CASES OF ANTERIOR POLIOMYELITIS

In response to the inquiry in the October number of Clinical Medicine for experience with paralysis I write you about a few cases, although from memory only.

Case 1. Girl between two and three years old, puny but bright. No prodromes. Arose in the morning and limped whining and crying to the kitchen, saying she could not walk good; wanted to go back to bed. I was called in three or four days later. Child in chair; could not raise right leg; could not place right hand on left shoulder, but the lower arm was all right; held head stiff from paralysis. Some febrile action. Bowels (in this case only) loose. The parents thought the child had suffered from a fall some two weeks before. No great pain at any time. This case did but poorly for three months, and it took eight months for complete recovery.

Case 2. Boy of four years. No marked symptoms except he could not throw one leg forward. Only the muscles on front of thigh were affected.

Case 3. Very similar to No. 2, in all respects. No marked febrile symptoms nor pain. Gradual recovery.

Case 4. Girl of 12. Had had one or two irregular menstruations. Of womanly height and slender. Called for paralysis. She was very constipated all the time. Muscles on the front of one thigh were the

only ones involved. This patient and all except No. 1 (whom I did not observe closely) could at least to a certain extent draw the leg back, but none could throw the leg forward. All these cases occurred late in the fall or early winter of 1909. This patient, now a year older, has been very slowly recovering. She goes to school, but walks with a crutch when going any distance.

Case 5. A big girl of 13. Was consulted by letter because of inability to use pencil six months after a slight paralytic attack. Slowly recovering.

Case 6. Was consulted by letter. Patient lives at Port Oxford and has had no doctor. Complete inability to walk. I saw the father in August, seven months after the first illness. He reported a slow recovery.

In all these cases there was only one thigh involved. In Case 1 the entire side, from head down, was affected. In Case 5 the forearm was involved. All were in families of from four to eight children.

There was no isolation of any case, and no second case in any family.

From the above I deduce a noninfectious, or, at most, a very slightly contagious or infectious disease, with a tendency to involve only localized spots of one side of the membranes of the cord, the lack of pain showing but slight effusion.

In severe cases I believe gelseminine, to reduce fever and pain, would almost be a specific *if the doctor would stay and see it administered* and then leave intelligent directions. Atropine would perhaps be very good.

All recoveries, if the cases are severe, are probably slow.

If pain can be localized would not hot air over the cord be useful?

Until I read the newspaper reports I thought we had something all by ourselves. These cases were several months ahead of any that I saw reported.

F. J. SCHLIEMANN.

Gold Beach, Oreg.

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[The doctor's suggestion of "hot air over the cord" is worth considering. Of course this should be used only after the acute symptoms have entirely passed. We hope someone will try gelseminine and report.—ED.]

CHROMIUM SULPHATE. A LESSON FROM BYRON ROBINSON

Since my report of a case of extensive ulcerative proctitis treated with chromium sulphate (*Helpful Hints for the Busy Doctor*) I have had one more case treated on the same plan and with as good results. In the last case the patient was a woman 68 years old. There were large internal piles that would bleed at every stool. These I removed by injections.

I have been trying out the addition of chromium sulphate to my treatment of beginning pulmonary tuberculosis cases. I believe it is a good thing. My reasons are as follows: first, many patients suffering from incipient tuberculosis are also neurasthenic. If we can build up the nervous system and make it more stable we place the patient in just that much better condition to overcome the tubercle bacilli. Second, the pulmonary tract is an outgrowth from the alimentary tract. Byron Robinson in his book on the sympathetic nervous system gives many instances of the close relation of the two systems.

If the tissues of the colon are acted upon favorably and an infection overcome why not also one in the lungs?

As a side issue I will say that I have cured several cases of chronic bronchitis in old people by giving my entire attention to the rectum. I would find a few old piles or some chronic lesion that had existed for years and was the cause of the reflex disturbance in the chest.

Every practician should have and read Dr. Robinson's books. There is no work published that will do the average man more good than "The Abdominal Brain." It will make him realize that the man is a composite whole with every organ in the body dependent upon its fellows and that disturbance of one part causes more or less disturbance in some other. As a rule the organ in sympathy is one derived from the same portion of the blastoderm and in the same system, though far removed in adult

life. It is by this kind of reasoning that we may often more fully understand the symptoms and make a more accurate diagnosis in our chronic cases.

I trust I have not written too much, but the consideration of the body as a whole is a hobby of mine.

One word more: Baby three months old, 146 boils on body at one time; streptococci in almost pure culture; had tried all usual methods and vaccine therapy with some gain with the last. Then I gave calcium sulphide to saturation. *Well baby!* That's all.

CLIFFORD E. HENRY.

Minneapolis, Minn.

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[Dr. Henry's first article, to which he refers, appeared in the July-August, 1910, number of *Helpful Hints*. He described a case of what appeared to be and was diagnosed as sigmoidal cancer, the patient being a woman 60 years old. She was treated with the sulphocarbolates internally and locally with antiseptic washes, with some improvement. The doctor them commenced giving her chromium sulphate, 4 grains four times a day. From that time the condition changed decidedly for the better, and at the time of his report she was practically well. He noticed that the stools, mucous discharges and the face of the ulcers all changed to a deep green color under this medication. Now he reports another similar case, with equally good results.

We shall follow Dr. Henry's experience with chromium sulphate in the treatment of tuberculosis with a great deal of interest. We know but little of the nature of the action of this remedy as yet, but we do know that it is giving good and in some instances really remarkable clinical results. In the treatment of prostatic troubles it already stands practically at the head of the list of remedies, and many cases of exophthalmic goiter and locomotor ataxia have been relieved by it, though it is by no means a "specific" in these diseases.

Byron Robinson was a great thinker. I fully believe that we shall appreciate this fact more in years to come than we do now. The physician who reads his works thoughtfully will get a great deal of practical help from them. Robinson was a great man to apply his scientific knowledge to practical ends.

Calcium sulphide surely is a winner!—ED.]

THE NEW TEST FOR MEDICAL COLLEGES

It is quite the fashion now to depreciate the work of all medical schools save a few which obtained the sole right to exist through the medium of Mr. Flexner. It is very praiseworthy to seek to advance the entrance requirements within certain reasonable bounds, but it is not necessary while doing so to cast aspersions on every one else who does not admit your standard as the only one.

Not only are all other medical schools, save the few favored ones, classed as undesirable, but even those who teach in them are accused of being actuated by sordid motives. I refer to articles printed in the Chicago papers from time to time by men of the profession who pose as champions of the uplift of present medical teaching.

Why confine "dishonest entrance requirements" to the smaller colleges? This slander is scattered broadcast to warn prospective students that the requirements of the State Board of Illinois are so low as to amount to a farce, whereas, they are the requirements of nine-tenths of the states. Even Mr. Flexner admitted that some of our well-known schools are not living up even to these requirements. It may be questioned whether those who demand two years of college training require that training to be gained in a first-class college. Statistics will show that the two years' college training is made in premedical schools that make no pretense at giving a liberal education such as is given in a first-class college. In fact, one year of these premedical courses is allowed to do the work of a two years' college course. By a strange inconsistency, universities that are clamoring for a two years' college entrance requirement and which are supposed to be the guardians of higher education are offering two degrees, the A. B. and the M. D. for a six-years' course.

It is said the aim is "to reduce the size of the classes." In other departments of

education classes are reduced by supplying more professors. It is not necessary to establish a prohibitive standard. If the desire is to reduce the size of the classes, why does Mr. Flexner advocate but one medical school for the city of Chicago?

Another serious difficulty which confronts these men who alone are interested in the progress of medicine is that "a great many socalled medical schools are purely commercial ventures organized for profit—or what is more common—to advertise the men connected with them." Here we are told that the teachers in all other schools, save the few already referred to, are teaching for the sake of advertisement. If these gentlemen when talking for the press would confine themselves to the question in hand, what constitutes a good medical school, and discontinue attributing sordid motives to those who differ from them, they would do more towards elevating the profession than by demanding an extra year of entrance requirements. Why is it that the only teachers who fling mud at each other are those engaged in medical schools?

There are evidently more ways of obtaining advertisement than by teaching in the smaller medical colleges.

In the same breath we are told that most of the smaller colleges pay no salaries to their professors. Do the university medical schools pay salaries to all their professors? The American Medical Association in requiring that seven instructors devote their whole term to teaching has indicated a maximum which few schools live up to. Supposing that the favored medical college pay these seven men high salaries to devote their whole time to college work, will they be able to contribute anything to the eighty or more extra professors engaged in their schools? Experience has shown that they have not. In fact, it will be found that many of the paid professors are engaged in other departments of university work besides that of medicine. Why then speak of it as a slur that physicians teach in smaller colleges without salary? If it be not an advertisement, why do physicians in our greater medical schools pay for the privilege of holding a chair? Does not the advertisement pay them?

We must conclude from much that we read on this subject that the only medical school that rises to the dignity of the situation is one which is always losing money, paying higher salaries to all the professors, and ever on the alert to reduce the size of its classes. This is the new test for a good medical school. The conclusion follows: either get an endowment of millions from private sources or hand over medical education to the state with its boundless powers of taxation. Of course, this latter alternative would be quite as disagreeable to the favored few as to the smaller medical schools. We need not take it for granted that pure philanthropy belongs only to those who conduct endowed institutions.

ALEXANDER J. BURROWES.

Chicago, Ill.

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[We take pleasure in publishing this critique, written by the distinguished president of Loyola University.—ED.]

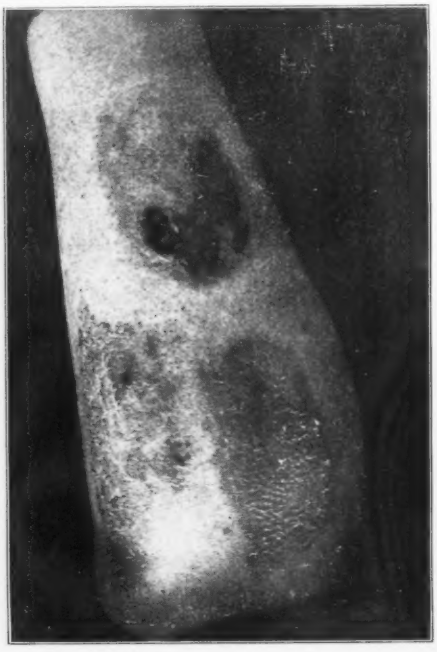
A PECULIAR DERMATITIS

I am enclosing you two pictures of a skin disease I found some time ago, with the following history, as nearly as I can get at it. The patient was Mrs. J. I., age 36, married eighteen years, mother of two children, youngest eleven years old. She had four miscarriages previous to the birth of the oldest living child.

In July, 1909, she began to notice symptoms of uterine enlargement, though the menstrual periods continued regular. The attending physician could not diagnose pregnancy. This continued until April 11, 1910, when her physician removed two polypi and something else described by the patient as "a growth." I cannot ascertain what this was. Two days prior to the operation skin lesions, as shown herein, began to appear on the abdomen and gradually extended down the anterior portion of both legs, later involving the arms. These have recurred in some places as many as three times. There are none on the face, neck, hands or back.

The eruption first appears as an ordinary dermatitis, then becomes vesicular and later pustular, and then the surface sloughs

off, leaving a dark purple color which up to this time (six months after the first appearance) still remains. She has had more or less vomiting all through the trouble, but of late has been unable to keep any food on



The peculiar dermatitis

the stomach very long. Bowel movements have been free but there is no diarrhea. She urinates very freely. Examination reveals nothing abnormal in urine whatever.

The patient has always been a working woman and her surroundings are not very good. She has never eaten cornmeal in any form at any time of her life. The father died of Bright's disease. Mother is living at 74 years of age and is in good health. The rest of the family history is negative.

The woman is large and fleshy and very nervous.

There is no pain about these lesions, but there is a feeling which she describes as that of a burn after the acute stage is over. Some of her symptoms fit in with pellagra very closely while others are away off.

If from this meager history you can give me some idea of what it is I would appreciate it very much.

A. C. D.

——, Wisconsin.

[From the data furnished we are inclined to regard this as a case of dermatitis herpetiformis, pustular variety. It is not always easy, as you know, to distinguish dermatitis herpetiformis from herpes gestationis and some forms of pemphigus. Not infrequently dermatitis of this type appears in women suffering from endometritis or other disease of the uterus and adnexa.

Another view of the eruption

The blood of this woman should be examined together with the contents of the bullæ when they first appear and a scraping from the affected area after crusts have formed. If you will consult Hyde's "Diseases of the Skin" you will find a very excellent description of the various forms of dermatitis herpetiformis.

The exanthem may be vesicular, pustular, papular or even purpuric in type and multiform combinations of these lesions may recur in every variation. In typical cases

the disease presents vesicular symptoms of the herpetic type. Later the contents of the bullæ become cloudy, hemorrhagic or purulent. Burning sensations are usually experienced. Itching may or may not be complained of. Pigmentation is frequently marked and occasionally lesions are distinctly purpuric in appearance.

This disease may last for months and even for years with periods of relative or entire immunity. It is extremely rebellious to treatment. Crusting, lymphangitis and lichenfication may be the result of scratching and secondary infection. In grave cases there is a more or less progressive cachexia, diarrhea (evidencing gastrointestinal involvement), fever, alternated with chills and involvement of the respiratory organs or kidneys. Serious disturbance of the nervous system is frequently observed; in fact, the disease, while it occurs in most sexes and at all ages, is met with most frequently in individuals of neurasthenic type or in those in whom the nervous system has been subjected to unusual strain. Menstrual irregularities, pregnancy or the puerperal state, nervous shock, defective renal excretion and exposure to cold have been cited as causing the malady. In our own opinion there is an underlying toxemia in every case. Other clinicians consider the disease a neurosis.

In order to treat such a case successfully it is essential that a normal condition of the body chemistry be maintained. The patient should receive nutritious, easily assimilated foods, spend a great deal of time in the sunshine and exercise regularly in the open air. Arsenic in small doses frequently repeated is of extreme value. We would prefer the arsenates of iron, quinine and strychnine, alternated week and week about with arsenic iodide, gr. 1-67, after meals. Iridin, stillingin and boldine in rather full doses should be given before eating. Small doses of blue mass and soda and podophyllotoxin should be given at 8, 9 and 10 every second night and a laxative saline draught administered the next morning. The affected areas should be sponged with a carbolated solution of epsom salt, one ounce of magnesium sulphate and 20 minims of carbolic acid in 3 pints of water, morning and night; the parts are then to be dried and carbenzol or similar product applied upon gauze.

Existing disturbances of the general economy, i. e., acidemia, kidney disease, intestinal indigestion, constipation, etc., must be recognized and treated. In every case the reproductive organs should receive special attention. Many of these patients respond after a preliminary course of eliminants. Nuclein will probably prove beneficial. The urine should be examined frequently, at least every ten days, and a normal output of urea and solids secured. Small doses of pilocarpine and applications of the hot-pack have proven helpful in very many cases.

A leucodescent or similar high power lamp, used with the green or violet screen, may be serviceable.

We do not think there is any reason to suspect pellagra here. We trust, however, that the doctor will keep records of the progress of this patient and send us report for the benefit of the profession.—ED.]

WHO WANTS THESE FORMULAS?

Dr. J. H. McCartney, of 929 Lake Avenue, Rochester, New York, says he has useful formulas for the treatment of asthma, hayfever and malaria, which he will gladly send free to anyone who wants them, provided they will send self-directed and *stamped* envelope.

COMMENTS ON THE OPERATION OF CIRCUMCISION

The operation for circumcision described by Dr. Breakstone (CLINICAL MEDICINE, October, 1910) is identical with the one I do. However, I have found the dressings herewith illustrated an improvement upon any formerly used. After getting the operation to the suture stage, suture in the usual way, by interrupted sutures, tie, and leave suture-ends two inches long. Have an assistant hold the ends separately on each side until a small roll of gauze is placed about the glans, over the tied sutures, then bring the free ends of the sutures over the gauze dressing and tie in place. The last suture ties in both ends of the gauze, making a

dressing which can not be removed by the patient, is not easily soiled, prevents obstruction of the urine, and renders bandages or other dressings superfluous.

Since using this method I have never had the annoyance from erections that are often a great nuisance following this operation.

Your favorite dry antiseptic may be used with this dressing, but in infected cases I

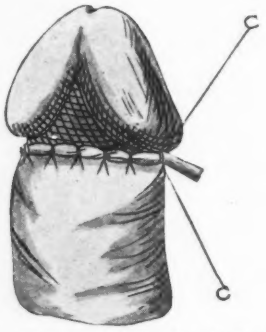


Fig. A. Sutures applied and ready for dressing

have used wet dressings until the stitches were ready to come out. The gauze should be applied loosely so that in case of swelling it will not cause unnecessary constriction. Should this occur, however, you may cut the gauze with a pair of sharp scissors in one or two places between the sutures and no further trouble is experienced. Sutures I like best are silkworm gut or horsehair.

FRANK A. GREEDY.

Denver, Colo.

GENERAL DIRECTIONS FOR LENGTHENING LIFE AND PREVENTING DISEASE

Dr. E. A. Huff, of Warsaw, Indiana, issues slips bearing these very lucid instructions:

1. Breathe pure air night and day; breathe deeply; ventilate living and sleeping rooms at all times of the year. No air, no life.

2. Drink much pure water between meals. Don't drink iced water, iced tea or iced milk. Avoid tea, coffee and alcoholics. Do not drink while eating.

3. Live on a diet of plain food. Chew all food thoroughly. Have a variety of food, but do not eat too much. More sickness and death result from overfeeding than from underfeeding. Don't eat when greatly fatigued or when angry or when overcome by grief or excitement.

Fig. B. Gauze ½ inch by six inches

4. If your teeth are faulty have a dentist put them in good condition. If you have no teeth, buy some. Maintain a perfect toilet of teeth and mouth.

Fig. C. Gauze loosely rolled or folded, exact length to be determined, when last suture is tied

5. Attend nature's calls promptly; delays are dangerous.

6. Take sufficient exercise every day, always in the fresh air.

7. Bathe frequently; cleanliness approaches godliness.

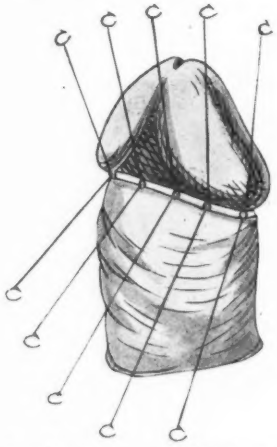


Fig. D. Dressings in place. Nothing further needed, except to tie remaining suture

8. Be regular in your daily habits, and avoid extreme fatigue, worry, quarrels, ill temper, and extremes of all kinds.

9. Cultivate cheerfulness, placidity and will-power.

10. Take no medicine or drugs except on the advice of your physician, and have

him examine you thoroughly two or more times a year to see if every organ is doing its work properly. It is better to be safe than sorry.

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[We wish every practician in the country would distribute similar literature. It is a peculiar thing that the conscientious physician feels impelled to give instructions to those among whom he resides which must of necessity materially curtail his own income. Half the ills of humanity are due to disregard of the ordinary laws of health. If the physician teaches his clientele to exist intelligently, he is going to find his exchequer seriously depleted at the end of the year, and yet physicians are doing this thing every day, and smile when shrewder people sneeringly remark: "As a business man the doctor is a poor proposition." The "business man" would certainly not distribute general directions for lengthening life and preventing disease.—ED.]

THE ARMY MEDICINE CHEST

On page 1116 of the October CLINIC Paul W. Gibson, presumably an army surgeon, though he does not so state, takes occasion to "call me down" for my criticism of the regular-army medicine-chest. The gentleman intimates that my remarks were almost, if not quite, *lese majeste*. In my simple ignorance I have lived almost ha f a lifetime supposing that where the Constitution granted me the right to express my opinion that it meant what it says; here, at this late day, I find that I have been mistaken, and that that particular article was put into that immortal document as a sort of joke. I suppose that I have a list of transgressions laid up against me that would indict me for treason, if some of the Army surgeons would but take the trouble to look them up, for I have never been in the least careful about speaking my mind on any subject that I might form any opinion upon.

I stated that the Army medicine-chest was "archaic," and since my return from the maneuver encampment that opinion is strengthened. It would be folly for me to say there are no good things in it. I could, if marooned on an island where I could obtain no other medicines, make out to get along with it very well, but in this day of enlightened therapeutics it is behind the times. It is of the school of twenty years ago. Outside of the hypodermic alkaloids that Dr. Gibson points to with such pride, there are very few modern remedies. And if you will kindly glance over his article again, you will see that more than half his list is made up of these hypodermic tablets.

Before passing to a cursory analysis of the medicinal contents of the regimental medicine-chest I wish to pay my compliments to the man who arranged the accessory side of the thing. The chest contains, in the smallest space possible, an equipment of diagnostic instruments, medical appliances and necessaries, that are as nearly complete as anything I ever saw, and these, too, of the latest and most-approved pattern.

It is in the medicinal phase of the chest that progressiveness is lacking. Dr. Gibson mentions epsom salt. Now, I have no desire whatever to attempt to practise medicine without this valuable remedy, but I submit that sixteen pounds of it in one case is a little greater quantity than is absolutely necessary. One would suppose that the designer of the case expected each individual man in the regiment to need cleaning out on an average of once a week. I suppose the man that got up the case had a consultation with the Ration Board, and he knew what the Ration Board was going to feed the men so he arranged the salts accordingly. They got so busy shoveling in the salts that they forgot the castor oil. They didn't forget, however, to put in four pounds of vaseline and three different kinds of medicinal plasters. Now, if any man will point out to me where a medicinal plaster ever accomplished any good I shall be greatly indebted to him.

Not content with furnishng the poor suffering "rooky" with his proportion of sixteen pounds of salts, they chucked in four pounds of compound cathartic pills. Then to even matters up, they stuck in a pound of turpentine and another of glycerin—good things, both of them, but you and I can think of other things so much better that the space occupied by them may be said to be wasted.

I could go on indefinitely and call your attention to monstrosities, but will append a few of the most glaring only. The case contains a five-ounce tin of tablets of arsenic trioxide, a three-ounce tin of tablets of ipecac, a five-ounce tin of tablets of sodium bicarbonate, and a seven-ounce bottle of tablets of sulphonal.

The case is perfectly guiltless of any of the newer remedies. I looked in vain for so common a thing as calcium sulphide. I was obliged to treat my gonorrhea cases with the old lead-acetate injection, for there was no argyrol. I gave them salol as an intestinal antiseptic, for the case contained nothing better; I could find no zinc sulphocarbolate for an intestinal antiseptic. The man who got that case up never heard of nuclein. His mind did not reach even as far as aconitine, to say nothing of the trinity combination.

In conclusion, I wish to state that I refuse to be drawn into a controversy on this subject. My time is entirely too busy to waste in the discussion of a matter that will be of no benefit to either party. After we were through, the Army men would be convinced that I am an ignoramus, and I should be convinced that they are consumed with self-sufficiency. This I must say, however: My association with the Regular-Army surgeons at Camp Cosgrove was of the most gratifying nature. I found them invariably to be men of culture and education, genial, whole-souled, and always ready to lend a helping hand. I shall ever remember with emotions of pleasure my meeting with each one of them, but more particularly Chief Surgeon, Lt.-Col. Ebert, Major Surgeon Trubey, and Major Surgeon Munson, the latter the most eminent authority on military sanitation and hygiene.

CHARLES STUART MOODY.

Sandpoint, Ida.

DR. T. D. CROTHERS TO LECTURE IN ST. LOUIS

Dr. T. D. Crothers of Hartford, Conn., editor of *The Journal of Inebriety*, will deliver a series of lectures on "Alcohol" and on "Drug Addiction," before the students of the American Medical College of St. Louis. These lectures will be given December 8–10, 1910, and will be open to the general public as well as to students and members of the medical profession.

WARM COMPLIMENT FOR "CLINICAL MEDICINE"

I have been familiar with THE AMERICAN JOURNAL OF CLINICAL MEDICINE throughout its present life as well as in its chrysalis condition as THE ALKALOIDAL CLINIC. While one might not always keep from suspecting that in its earlier condition it was sometimes made subsidiary to the sale of alkaloidal preparations, I am unable to see how any medical man, not a therapeutic pessimist, can refuse his admiration of its work for his profession, and through it for the human race, in its present life. For me it is an impossibility to get along without its monthly visits.

GEORGE M. AYLESWORTH.

Collingwood, Ont., Can.

THE TREATMENT OF POSTPARTUM HEMORRHAGE

Hemorrhage during or soon after the third stage of labor is one of the most trying and dangerous accidents connected with parturition. Its sudden and unexpected occurrence just after the labor appears to be happily terminated and its alarming effect on the patient, who is often placed in the utmost danger in a few minutes, tax the presence of mind and the resources of the practician to the utmost.

There is no emergency in obstetrics which leaves less time for reflection and consultation, and the life of the patient will depend on the prompt action of the doctor. It is one of the most frequent complications of delivery, but generally a preventable accident, if the third stage of labor is conducted as it should be. This fact cannot be too strongly impressed on the doctor.

The completing of the second and entire third stage of labor is the most trying and dangerous time for hemorrhage. The placenta is separated by the last pains and the blood, which in greater or less quantity accompanies the fetus, probably comes

from the uteroplacental vessels, which are then lacerated, almost immediately afterward. The uterus contracts firmly and in a typical labor assumes the hard cricket-ball form. The result is the compression of all the vascular trunks of the uterus, and thus the flow of blood is prevented. The vessels are large and destitute of valves, and if contraction is absent, or only partial and irregular, it is equally easy to understand why blood will flow forth in such appalling amounts.

Preventive Treatment.—This should be practised in every case of labor. Place one hand over the uterus and follow it down as the child is delivered, making continued pressure for fifteen or twenty minutes. Then use Crédé's method until the placenta is expelled, and then continue pressure for thirty minutes to one hour, to insure firm contraction. Then apply the binder if necessary to keep up gentle pressure. It is good practice to administer a full dose of ergot as soon as the expulsion of the placenta is effected.

Curative Treatment.—There are two ways nature adopts for preventing postpartum hemorrhage. First, that which produces uterine contraction. Second, that which produces thromboses in the vessels. The first is the one most commonly taking place, and only in the worst cases does it fail.

Uterine Pressure.—Have the patient on her back, legs flexed, introduce one hand into the vagina or uterus, grasp the fundus with the other hand, making downward pressure, and clear out the placenta and any clots found there. Then keep the hand in the vagina, in the posterior cul-de-sac, so as to reach the posterior part of the uterus, at the same time grasping the fundus with the other hand, through the abdominal wall, making counterpressure, thus bringing the walls of the uterus together, meanwhile pressing the organ against the posterior wall of the symphysis pubis and keeping it there. We then have the leaking uterus between three pressure points.

Now have the assistant remove the pillows, raise the foot of the bed, allow a current of air in the room, and continually fan the patient. Dash cold water in her face and slap the abdomen with a wet towel or wet hands. Give glonoin and atropine hypodermatically, or put a tablet in her mouth and let her chew and swallow it. This will reduce shock to the minimum, save time and flush capillaries. Next give a full dose of ergot in some form (best hypodermically), repeating as necessary.

Ice introduced into the uterus sometimes is good. Packing the uterus with sterile gauze saturated with acetic acid or apple vinegar will often prove of benefit. Packing the vagina is mentioned only to be condemned. Injection of very hot water into the uterus is highly recommended. Some of the styptics might be used to advantage. In extreme exhaustion and exsanguination hypoderm clysis of normal saline solution, a pint or more (and repeated as necessary), injected into the nates or thigh or under the breasts, is a life saver. Also a hypodermic of ether, a fluid dram, may be given, and repeated as necessary. After the flow is stopped, the following combination may be given:

Strychnine, 1-67 to 1-30 grain; glonoin, 1-250 to 1-100 grain; cactin, 1-100 to 1-67 grain; nuclein, 4 to 8 minims.

Repeat this dose every two to four hours. This is excellent. It can be given hypodermically if necessary. Continue this for some time.

A few doses of atropine every four to six hours, for a few doses, to flush the capillaries, is of value. Brandy or whisky given in 1- or 2-dram doses is a good stimulant.

Convalescence requires the best of nourishing diet and tonics to increase the quantity of blood. A trip to some mineral springs is of benefit.

The compression-method is to me *the* emergency treatment and will save the patient's life, while to trust to medicine given in any way and depend on it exclusively is very bad practice and almost always ends fatally.

M. G. WALKER.

Coleman, Tex.

[As yet we have received no reports of the failure of atropine in stopping any form of uterine hemorrhage. It must be given in full doses, enough to flush the skin. Quicker action is secured by adding glonoin.

Ergot is too slow. Dr. Walker rightly names all available means, for the best is that which can be utilized at once.—ED.]

SUPERIORITY OF POSITIVE MEDICATION

Asserted facts in medicine and clinical hypotheses must have support in truth, else they are error. There is no intermediate position. Any medical theory or practice not correct with respect to any given physical disorder, or as to remedial agents and their application, is false, whatever the prevailing theories and rules of treatment may be.

If every teacher in every medical college would get focused into his cranium the guiding light that sways Dr. Waugh, the Dean of Bennett Medical College, and Prof. Dorland, of the University of Pennsylvania, their graduates would go forth and enter upon the path strewn with rocks and thorns that bruise their feet and tear their flesh, in the early struggles of practice, equipped with something superior to a bootless diploma, ready to cope with problems that cost so many head- and heart-aches, where now this knowledge must be acquired in the shadow of the wings of the brooding Angel of Death.

I cannot conceive how it is possible for any practician to persist in the stupid faith of the darkness of ignorance after reading the magnificent address of Professor Dorland, delivered before the 1910 graduating class of Bennett Medical College. [See CLINICAL MEDICINE, June 1910, page 613.]

Some of our brainiest medical editors will treat the very same subject in an absolutely diametrically opposite manner, thus demonstrating the falsity of our present-day instruction or a wrong conception of things due to superstition, credulity, and an ignorance inherited from the dark past.

Carbolic Acid for Wounds.—In this brilliant age of dazzling scientific light contributors to medical journals and their editors still continue to recommend solutions of phenol in water, when the pure article, either liquefied by heat, compounded with equal parts of chloral and camphor, or mixed with olive oil—as has been known for twenty years—is the only rational form in which this agent should be applied.

Almost daily there come under my care horrible machete cuts down to the bone. These wounds I pour full of full-strength liquefied phenol, thereby staunching the blood promptly and mitigating the pain. Afterward I dress daily with a mixture of phenol, chloral and camphor, the healing being rapid, without pus formation, while immunity from absorption is absolute. So, also, boils, ulcers, hemorrhoids, cancer, cutaneous diseases, catarrh, gonorrhea, burns, or any other disorder of the flesh may be cured with the agents named when used in proper strength.

Pure phenol (that is, full-strength carbolic acid) should never be applied where it will mix with pus or watery exudations that might dilute it so as to become absorbable, while any overflow should be promptly washed off with alcohol. The chloral-camphor compound or solution in olive oil may be applied anywhere with impunity. I use no other disinfectant for wounds or on my instruments, and I never have any inflammation; and there is no climate anywhere more favorable to septic infection of wounds and to impregnate instruments than right here.

Fevers Can Be Aborted.—I am often intensely pained when I read denials, by reputable men, of the power of drugs to abort and to cure disease, as also the assertion that fevers must run a specific course, when, as a matter of fact, I am demonstrating the contrary every single day in the year. I will try to prove to the medical profession, those who read my occasional contributions, that I am doing far more than I tell in print.

I am, at present, caring for the laborers on one of the big American rubber plantations, where the percentage of sickness and death has been appalling under the former galenic medication, and I will now give you sceptics and therapeutic nihilists the result of my methods with positive medication as corroborated by those Americans who engage my services, and who, absolutely voluntarily, have added twenty-five percent to the charges made by me, so satisfied were they with the result of my work during the first four months (the sickliest months in the

year) of my professional services. This report will cover the year 1910.

My readers all know the character of the fevers that confront me by the hundreds of cases. However, three hours or less is about the average course most of them run under my treatment, with but rare relapses. Putrid dysentery, if the patient is seen early enough, seldom lasts more than twelve hours.

Many of the profession in the United States are familiar with the medicines I employ. Also, there are able Mexican practicians who have learned my methods. These have tried to explain to the other native doctors my simple rules of practice, but only too often are they ridiculed for their pains. As to that, ridicule does not worry me.

Medicine and Progress.—Those who may have read my various disquisitions know that for many years I have predicted the evolvement of a lofty ideal standard of medical science, a time when physicians would be able to emancipate suffering humanity from the scourge of disease and to circumvent premature death, never then dreaming that I should live to see the dawn of a promised realization of my prophecy, as now so beautifully bodied forth in the form of legalized sterilization of the defective members of society and the arrest of the spread of infectious diseases. The very atmosphere is imbued with the germs of rational thought, so solemn and profound that the popular mind is beconing impreganted to such a degree that the people begin to demonstrate a dangerous impatience with medical apathy by taking refuge outside the professional realm.

These things should alarm and bring doctors to their senses. Were they making their pretensions even only partially good, their patients would not flock to still more preposterous pretenders, in quest of what a medical farce fails to supply. They know that progress is on and that their doctor has not kept pace, and so hope to find some of their due inheritance in the possession of his antagonists.

All this deplorable demoralization will properly reform itself in time, as truth always prevails in the end; but it will come to pass the sooner if only doctors will cut loose from their barnacled anchorage and employ medication in truly scientific practice. Any doctor who cannot or who does not do anything I can do, as readily as he can dress a pin-scratch, is a stranger to scientific medicine, though in this I myself am yet a mere bungling tyro, to such perfection is the practice destined to develop in the near future.

Rational Medication Wins.—I know, and scores of worthy practicians among you know, that clinical instruction and practice, as generally in vogue, are erroneous, and current materia-medica and textbook rules are false, because they are impotent to cope with tropical-disease conditions which I control with scientific medicine and rational methods, without difficulty and with a mortality too insignificant to be believed.

There is no use to pretend that the diseases treated by me are not the most virulent and deadly known to the profession, or to imagine that galenic preparations and treatment could cope with them without having in their wake a startling mortality, or prostration and emaciation involving a protracted convalescence.

Your own progressive physicians who announce the abortion or the rapid cure of pneumonia and typhoid fever, with a low death-rate, are sneered at, and the profession is promptly assured that the diagnosis was erroneous and the men with the courage to make such an announcement the victims of stupid ignorance. But the men making these strictures never saw one of the patients treated nor have they the slightest testimony to support their denials, save their own mournful experience with worthless drugs and wrong methods—exactly the fateful contingencies that develop and confirm medical nihilism.

I contemplate quitting this field in a year, or two years at the most, and should like to leave some young man of iron constitution and nerve to initiate himself in my stead. It is a post, I will add, though, requiring self-abnegating devotion to medical science, and putting up with a trying isolated practice. Such a man should be one with a working knowledge of Spanish and capital sufficient so as not to be cramped at first; willing to take up and prosecute the work

on the lines I pursue, to the attainment of that ideal which I see may ultimately be realized. I am more than willing to give such hints as may be useful to anyone in quest of a legitimate therapy and system of medication.

ROBERT GRAY.

Pichucalco, Chiapas, Mex.

LOCAL USE OF GLYCERIN IN PNEUMONIA

Just a word as to Dr. J. M. Shaller's treatment of lobar pneumonia, published in CLINICAL MEDICINE some months ago. In addition to the doctor's use of aconitine, I should advise the use of glycerin, externally, to invite the serum of the blood and thus remove congestion. This can be done either by the application of a large plaster of antiphlogistine, or a plentiful amount of glycerin may be put on with canton flannel, the latter to be covered over with cotton batting to absorb the water abstracted from the underlying tissues. With glycerin thus applied I have aborted double pneumonia in a lady patient eighty-three years of age, and I feel satisfied that without the glycerin she would have died. She was able to be up about the house in four days.

A. K. VAN HORNE.

Jerseyville, Ill.

[When we are thinking about local applications in pneumonia we should not forget one very useful proprietary remedy—Lloyd's "libradol." This is a plastic dressing, carrying the medicinal constituents of tobacco, lobelia, capsicum, dracontium and other useful plant remedies. It contains no opium or other dangerous narcotics. In "colds" and pneumonias of the sthenic type it makes a nice local application; if there is much depression it should be used with caution, if at all.

This is the pneumonia season. The doctor who has not learned the possibilities of such remedies as aconitine and veratrine, combined with digitalin and strychnine arsenate, in the "trinity" and the defervescent compound, and the importance of the clean-out and of the intestinal antiseptics, has an agreeable surprise in store, provided he will investigate and actually *try*.—ED.]

HOW I TREAT PNEUMONIA

Having established the presence of pneumonococci in saliva and sputum, begin by clearing the bowels with the podophyllin and calomel granules, 1-6 grain each, giving one or two granules every hour till 1 or 1 1-2 grains of each drug has been taken, according to the patient's state. (Treat the patient!)

Then for the fever. If sthenic, give aconitine, digitalin and veratrine. If asthenic, omit the veratrine, but add strychnine. Keep the bowels thoroughly clean, but now avoid excessive purging, for this weakens and overtaxes the heart. Use the sulphocarbolates and the menthol compound for antiseptics. Disinfect the sputum, before it dries, by covering it with a five-percent phenol solution. Give (from the first) nuclein, 15 minims every four hours, under the tongue, with a 20-minim dose once every evening, hypodermatically. Ease the cough with codeine.

Give rest. *Watch the pulse.* Guard against any and all worry or excitement, however slight it may be. Keep your hypodermic syringe at hand, and don't be afraid to use it, *only make reasonably sure you are right.* Do not allow the patient to leave the bed till you are sure it is safe. As a tonic, put him on the triple arsenates of quinine, iron, and strychnine with nuclein, with occasional doses of salithia.

At every stage of the treatment calcium sulphide given to saturation is a great weapon. During the entire treatment the *room should be well ventilated*, only avoiding draughts and keeping the temperature at 65° F., or a trifle higher. Occasional enemas of soapy water, at 110° or 115° F., will be found useful to circumvent medicinal purges.

During the earlier stages of the attack I find a warm bath with 4 ounces of magnesium sulphate to one quart of water, administered every twelve hours, of great assistance. This solution may be as warm as the patient can bear without discomfort, being sure to rub the body, limbs and the whole system till full reaction occurs. To assist in relieving visceral congestion the

feet and lower limbs may be treated with occasional hot baths. Cool packs are applied to the body, these to be removed as soon as the patient generates sufficient systemic heat. An ice-bag to the head may be of benefit in relieving cerebral congestion.

When *complications* call for the same remedies as are indicated by the primary condition, it may be necessary to give heavier doses to combat the evil, inasmuch as it is indicated by two or more affections.

Endocarditis.—Here veratrine and aconitine are the indicated remedies for the fever and the excitability of the heart, and are to be given every ten to thirty minutes, as needed. Do not neglect the "keep-clean" system, and remember the necessity of giving 5 or 10 grains of the sulphocarbolates three times a day, before meals.

Neuralgia.—See to elimination. Order rest—thorough rest. Administer quinine, gr. 1; aconitine, gr. 1-134; digitalin, gr. 1-67, half-hourly. Give brisk massages. If the headache is severe from excessive nervousness, give acetanilid to the patient's full capacity. Glonoin answers for temporary relief.

Meningitis.—I treat fever of a complicating meningitis about the same as in other given cases, pushing nuclein at the rate of 10 minims every half hour, subcutaneously, or double that amount by mouth, placed under the tongue. Look first and last to thorough elimination. Flush the capillaries with hyoscyamine or glonoin. Digitalin and strychnine arsenate, gr. 1-67 each, with veratrine, combat spasms. Reduce congestions with ice locally. Enjoin absolute quietness.

E. H. HENDRICKS.

Randlett, Okla.

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[Every phenomenon has its meaning; and the man who looks beneath the surface to recognize causes, may ask himself the reasons for the confidence displayed by the user of active principles and pure chemical agencies. Compare this with the Franklin form of cautious suggestion that "in some cases it has seemed to me that possibly iodides might have been of some service!" Temporizing, cowardly, ready to run if the enemy's spear glittered in the distance—yet that is about all one could venture upon with the old crude uncertainties.—ED.]

THE SURGICAL CONGRESS IN CHICAGO

Thanks to the initiative of Dr. Franklin H. Martin and his co-workers on the staff of *Surgery, Gynecology and Obstetrics*, we are now having a great Surgical Congress in this city, one which has drawn hundreds of the most able surgeons of America to Chicago. The work of the Congress is mainly clinical. As all the world knows, the local profession is proud of its hospitals, of which it has its full share. For two weeks during the middle of November practically every one of these forty or fifty institutions has been converted into a surgical clinic, in which visiting physicians may see the work of the ablest men.

I presume that nearly every operation that can be conceived has been performed in Chicago during the Congress. Thus the visiting physicians have had the finest possible "post-graduate course," and entirely without charge. In the evenings there have been addresses on important surgical and allied subjects, and there has been no lack of social entertainment.

Everyone says that the Congress has been a great success, and now the demand, coming from every side, is that it be made a permanent event. Chicago holds the open door. CLINICAL MEDICINE can confidently speak for every member of the profession of this city in inviting the surgeons and physicians of America to return in 1911—and every year thereafter. This city is assuredly the "surgical center" of America; hence it should be, by all means, the permanent home of the Congress.

Next month we shall print "The Story of the Congress," presented in greater detail by Dr. Emory Lanphear of St. Louis, who was an interested visitor and participant in its work. We are sure that every doctor in the land will want to read his report.

The surgeons of this country owe a great debt to Dr. Franklin H. Martin. The idea of the Congress was his own, evolved out of his journalistic experience, and a natural corrollary to the work of his splendid magazine, *Surgery, Gynecology and Obstetrics.*

The brilliant manner in which he has carried his plan through reflects the greatest credit upon the doctor himself, and should serve still further to strengthen the position of his already strong publication. As an "advertising" stunt (perish the despicable word!) it was great! We hope it will bring him 10,000 new subscribers—even one from *you*, Doctor, who may read these lines.

LATER.—Since the preceding was written the organization of the Clinical Congress of the Surgeons of North America has been perfected. The purpose of this organization is to give the surgeons of the country the benefit of the latest developments in surgical science by the means of clinical demonstrations to be held annually in the principal medical centers of the country. Delegates to the Congress are to be elected periodically, one from each congressional district, two at large from each state, two from each province of Canada, two from Mexico and each Central American republic, and two from each colony of the United States, Porto Rico, the Philippines and Hawaii. This organization is an entirely independent one, not affiliated with the A. M. A., proposal to restrict membership to those belonging to the latter body having been voted down.

The following were elected officers of the Congress:

President, Dr. Albert J. Ochsner, Chicago.

Vice-president, Dr. John B. Clarke, Philadelphia.

Editor and general secretary, Dr. Franklin H. Martin, Chicago.

Treasurer, Dr. L. B. Kanavel, Chicago.

General manager, A. D. Ballou, Chicago.

A "BEYOND THE BORDERS" NUMBER

Early in the year 1911 we shall issue a "Beyond the Borders" number of CLINICAL MEDICINE, for which we have already accumulated a large amount of material. The leading articles in this number, as well as much of the miscellaneous and other departments, will be contributed by men who live outside of the United States. Probably no medical journal published has so many readers living in foreign lands. We shall be glad to hear from as many of these as possible, with short articles for publication in this special number. Especially shall we be glad to hear from medical missionaries, of whom we can count a large number upon our list, representig practically all religious denominations—Catholic and Protestant. The world is big, the distance which the CLINIC travels is so great and so much time is required for correspondence that we hope that our "Beyond the Borders" friends will respond at once.

"HELPFUL HINTS" ABOUT CALCIUM SULPHIDE

Just a few helpful hints in return for the many valuable pointers I receive from CLINICAL MEDICINE.

Calcium sulphide given in grain-doses relieves heartburn or any burning feeling in the stomach.

Calcium sulphide, in similar dosage, has acted as a laxative in some of my cases.

Calcium sulphide, one grain every two hours, has cured canker sores in the mouth within twelve hours.

Calcium sulphide given in 1-2-grain doses every three hours, to a woman 76 years old, who had an ulcer the size of a dollar just above the ankle, on the inner side, in association with local dressings, caused the sore to heal completely in three weeks.

Phenolphthalein sometimes works better if given with a tonic, e. g., quassin, hydrastin, or capsicum—best with last two.

If in some of your nursing women the milk supply is low, have them drink a full glass of water just before nursing and another glassful while she is nursing. Doctor Alcom put me next to this, and it works like a charm. Keep it up. Also do not forget to give the woman a cleaning out. I have also noticed that calcium sulphide increases the supply of milk.

In vomiting of infants look to the binder: sometimes it is too tight.

In persistent toothache give a big dose of saline laxative, then give 3 granules of aconitine. Into the cavity of the tooth, after having cleaned it out with cotton and dried it, put a small plug of cotton dipped in phenol. Over this put a wad of dry cotton, then cover with collodion.

Large enemas (at least four quarts) have stopped some hysterical attacks. In most of these cases constipation was present, the bowels not having moved for several days.

O. CHAS. SUMMERFIELD.

Chicago, Ill.

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[Some of these observations are new to us, especially the laxative action of calcium sulphide and its increasing the milk secretion. Have others observed these actions? Under what conditions?—ED.]

"MAGGOTS" IN VOMITUS: A CASE OF MYIASIS

I was very much interested in reading your reply to Query 5629, "Maggots in Vomitus," in the October number of CLINICAL MEDICINE. I am enclosing herewith a reprint which considers this matter in a very satisfactory manner. Dr. Eugene F. McCampbell is located in our office building and I had the pleasure of examining the specimens reported. Within the past two weeks he has had (from Ohio) two more cases. It was my good fortune to see both. One specimen (there were of numerous larvæ) was passed *per rectum*. In the other case (a woman) the "maggots" were vomited. Dr. McCampbell kept the specimens of the latter case in water for several days. They were *very much alive*, good swimmers, and more than an eighth of an inch in length. This measurement does not include the tail, which was more than the length of the body. It was impossible to incubate them until they developed into adult flies.

FRED FLETCHER.

Columbus, O.

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[Dr. Fletcher sends us a reprint of an article on "Myiasis Intestinalis Due to Infection with Three Species of Dipterous Larvæ," by Doctors E. F. McCampbell and H. J. Corper. This originally appeared in *The Journal of The American Medical Association*, October 9, 1909.

The authors say that infections of man by the larvæ of dipterous insects (myiasis) are very infrequent, though they have been known to occur since the early history of medicine. The insects may infect the skin and subcutaneous tissues, or they may invade the intestines.

They report a most interesting case, that of a woman, 72 years old, at the time of the report, who fifteen years before had had an attack of acute catarrhal gastritis, and had been under medical treatment almost continuously ever since.

At the age of 65 this woman began to pass "millions" of small green larvæ and a smaller number of white jointed ones. This attack lasted about a year, and during this time she became much emaciated. Since that time she passed these larvæ intermittently, much larger ones also being present. Attacks of nausea and vomiting occurred occasionally, but no larvæ were observed in the vomitus.

The woman lived on a farm and the surroundings were fairly sanitary, although manure piles and flies were abundant. Her weight at 65 was 180 pounds, but when seen by the reporting physician, at the age of 72, she weighed only 90 pounds. She complained of a constant aching pain in the abdomen, which was slightly distended and tender, and occasional colicky pains. She was constipated and used epsom salt almost constantly. The larvæ were found in a watery discharge, not in the usual stool. There was a mitral lesion and arteriosclerosis.

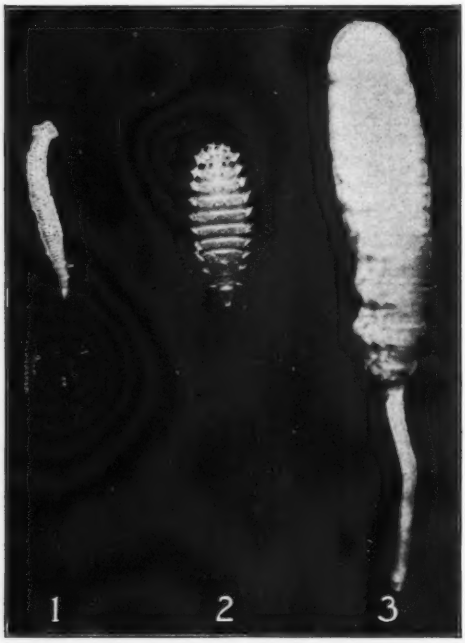
Many of the parasites were found in the stool of this patient and proved to be the larvæ of the following dipteræ: Anthomyia canicularis, the small black flower- or house-fly; musca domestica, the common house-fly; eristalis tenax, the drone- or flower-fly.

Of these, the larvæ of the anthomyia canicularis are said by the authors to be parasitic in man more frequently than any other dipterous insects. They have been noted in the intestines, ear, vagina and female urethra. About 30 cases have been reported, 25 being intestine-infections, and of the latter 5 were reported in the United States. The larvæ are elongated, "rounded posteriorly and narrow toward the anterior end," composed of ten segments, and 1 to 1.5 centimeters in length.

The eggs of the common house-fly (musca domestica) are deposited almost exclusively

in horse manure. The larvæ are white pointed maggots, 1 to 2 centimeters in length, and composed of nine or ten well-defined segments. There have been only five or six well-authenticated cases of human infection with this species.

The eristalis tenax, or drone-fly, is somewhat larger than the honey-bee. The larvæ



Larvae isolated from case of Myiasis intestinalis: (1) Musca domestica; (2) anthomyia canicularis; (3) eristalis tenax

have a "rat-tailed" appearance, measure 2.5 to 3 centimeters in length, have seven segments, and there is a long, slender projection, 2 to 3 centimeters in length, from the posterior end of the body. This is the rarest of the parasites mentioned and no cases of myiasis due to it have been reported in the journals.

The accompanying picture shows these three varieties of larvæ.

The reader will observe that Dr. Fletcher, in his letter, states that Dr. McCampbell has recently had a case in which the "maggots" were vomited, the parasites being kept alive several days, being "very much alive" and "good swimmers." In this respect they were much like the maggots found by J. B., our CLINIC correspondent, which were still squirming and crawling thirty minutes after they were vomited. In these parasites, says J. B., "the head tapers to a point, the tip of which is black. The tail end is blunt." This agrees very well with the description (and picture) of the larvæ of the anthomyia canicularis—and that is probably what they were.

How these larvæ reach the alimentary canal is a question. In commenting on the query of J. B., we suggested the possibility of infection from the nasal cavities. Drs. McCampbell and Corper think that possibly their patient ate the eggs or newly hatched larvæ with food-materials. It hardly seems possible that these larvæ could resist the action of the digestive fluids, so long as stated, but possibly they might be ingested during a temporary arrest of gastrointestinal secretion and so secure a "foot-hold." In the McCampbell case they persisted in the intestine for seven years, apparently—almost incredible, it would seem.

Four theories are submitted for the persistence of the larvæ within the alimentary canal.

"1. Persistence of the larval state for from two to seven years. It must be assumed that very large numbers of eggs or very young larvæ were ingested, bearing in mind the number which have been passed. There is one case in the literature of twelve years' standing.

"2. The reproduction of the larvæ within the intestine. This would most easily account for the large numbers passed for a series of years.

"3. The completion of the cycle by the hatching of the larvæ into the adult parasitic fly (wingless) and the laying of eggs by these flies in the intestines. We have observed no adult flies or remnants in the excrement.

"4. The continued reinfection by the eating of eggs or larvæ or the deposition of eggs around the anus and their subsequent invasion of the intestine."

The first method (possibly the second) seems most probable to the authors.

The authors of this paper do not outline treatment, though they have made experiments with the digestive enzymes. On theoretical grounds, thorough cleaning out with cathartics, the stomach-tube and colonic lavage, possibly using an infusion of quassia in the latter, and following with santonin, thymol, atoxyl (or similar organic arsenics) or similar parasiticides, should be effective.

If any of our readers have had cases like these we shall appreciate reports.—ED.]

BOOK-PLATES

How many readers of CLINICAL MEDICINE are interested? Perhaps *you*, Doctor, may have an "ex libris," or possibly you are making a collection. In either case there are at least two members of our editorial cabinet who would be glad to exchange copies with you. Write us.

LOOK TO THE HEART

In these days of laboratory research and of instruments used for precise diagnosis the heart lesions are sometimes nelgected. Counting the pulse is an ancient custom with doctors, but I fear the younger generation may fail to get the full benefit of this old custom. The sounds are often noted and valvular lesions are looked after, but what I wish to call especial attention to is the continuous frequency or rapidity. This is the signal of danger.

Given a case in which the heart beats 120 to 140 times per minute and the condition continues for several days, there is danger of a funeral. You often can predict the result several days before death, although the patient may seem to be doing fairly well. The thermometer may indicate but little fever. The tongue may indicate digestion and assimilation normal—the bowels and kidneys acting fairly well—but if the heart continues its rapidity, do not give a favorable prognosis, and if with the excessive rapidity there is irregular action and an occasional stop followed by an increase in rapidity, you may expect a fatal result inside of three days. It does not matter so much what the lesion, whether it be pneumonia, rheumatism, flux, malaria, typhoid, or what not. This continuous rapidity indicates carditis, and carditis as a complication is always dangerous.

I have nothing new to offer for the treatment of heart lesions, but just thought it might be profitable to some reader to have his attention called to a danger-signal that he may have forgotten or never knew of. In making your diagnosis, prognosis or plan of treatment, *don't forget to take notice of the heart.* It is the most vital organ; the nerves depend upon its integrity, and all other organs besides—because when the heart fails there is no remedy.

Look to the heart.

W. P. HOWLE.

Charleston, Mo.

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[Dr. Howle makes a good point, though he doesn't go quite far enough. When the doctor (any doctor) finds one of these cases of abnormally rapid pulse he should get

DR. W. P. HOWLE

busy at once—first of course to find out what the matter is. There isn't much satisfaction—to the patient—in predicting a funeral!

If the tachycardia is not associated with febrile disturbance, and is slow in making its appearance the physician will naturally

think of some heart lesion, with failing compensation. A careful examination should clear up the diagnosis. If such a case is treated reasonably early, with digitalin, sparteine, strophanthin, or other indicated remedies, the prognosis is not necessarily bad. Remember that rest in bed is (or should be) an essential part of the treatment and that it is just as important to keep the alimentary canal "right" and the nutrition at par as to give cardiac tonics. The clean-out, clean-up and keep-clean policy should be practised here—just as in treating acute diseases. Keep down the quantity of liquids.

Don't forget that tobacco sometimes causes tachycardia.

There are many nervous individuals who have a habitually rapid pulse—especially the hysteric ones. They fool the best of us sometimes. In these cases atropine or hyoscyamine sometimes acts beautifully. In this connection always think of exophthalmic goiter, in which neither the goiter nor the exophthalmos is necessarily prominent. Some of these cases are being cured by chromium sulphate, while there are many reports of success with quinine hydrobromide and ergotin in good-sized doses—following the plan of Forchheimer.

Occurring during the course of a febrile disease rapidity of pulse is to be expected, but when the pulse shows a tendency to "run away"—to get fast and at the same time feeble, it is well to observe the doctor's warning. In such cases we can often guard it better by conserving its strength rather than by whipping it up. Get the blood to the surface. Keep the surface of the body warm. The "trinity" combination of aconitine, strychnine arsenate and digitalin sometimes does its very best services in just such cases. In emergencies use glonoin, supported by atropine and strychnine arsenate. If the urinary output is low, sparteine is an excellent remedy. Again remember that the heart weakness is *usually* due to the continuous action of some poison on the heart. *Fight the poison!*

Abnormally slow pulse is sometimes as bad a portent as the abnormally rapid one. It, too, may betoken heart degeneration—myocarditis. Such a heart can only be harmed by stimulation. The two primal indications are *rest* and *elimination.*

Almost any form of autotoxemia may cause slow pulse, the typical illustration being the bradycardia due to absorption of bile, as in jaundice or cirrhosis of liver. We see a similar slowness in the socalled Stokes-Adams syndrome, also in some cerebral irritations or central nervous diseases.

Again—elimination! How that word does confront us everywhere? Almost every disease, of whatever organ, seems to be but a mask for autotoxemia in one of its myriad forms. "Clean out, clean up and keep clean!"—ED.]

GREAT OPPORTUNITIES FOR PHYSICIANS IN THE FOREIGN FIELD

While so many of our young physicians (and older ones, too) are complaining about the difficulty in finding good locations where they can make both ends meet and accumulate something for old age, there is a constant cry going out for help in the foreign fields. In the United States there is one physician to every 570 people, while in many other parts of the world there are whole regions without a hospital and millions must suffer and die without scientific care or skill.

The amount of work handled by some of our medical missionaries is simply enormous. It embraces practically every variety of ailment to which human flesh is heir. The young missionary physician finds ample opportunity for the most varied kinds of surgical as well as the most exacting kinds of medical and special practice.

The medical missionary and the trained nurse, however, are needed on the foreign field not only in their professional capacity, but because they are able to overcome prejudice, to open doors for the message of Christ and to incarnate that message in a way which is absolutely superior to that of the preacher or the teacher. There is a language which the whole human race can understand and which carries a message that every one, sooner or later, desires to hear. The medical missionary is master of this unspoken tongue of the heart. He is welcome to the home of the stranger. The fanatic Mohammedan allows him in the

innermost harem; the Mandarin calls him to his palace and the Brahmin leads him into his home. For the Christian physician and the trained nurse there is no chance to invest life that can compare for a moment in influence and power with that on the mission field.

Right now we are informed that different missionary societies are calling for more than fifty men and women and twenty-six trained nurses. Four hundred hospitals and 783 dispensaries have already been established in the missionary territory, from Greenland to India, and these institutions care for six million out-patients.

Physicians are needed immediately, we are informed, in China, Persia, India, Arabia, Mexico, Africa, Turkey, the Soudan and Philippine Islands. We have in hand a list of more than thirty-five openings sent us by Mr. Wilber D. Smith, secretary of the Student Volunteer Movement for Foreign Missions. Among our readers are doubtless hundreds of young men who have an intense interest in work of this kind. We urge them to consider this movement and to communicate with Mr. Smith, whose address is 125 East 27th St., New York City, N. Y.

WAS IT TETANUS?

Inasmuch as unquestionably great benefit is derived from the publication, by physicians, of their personal observations and results in the treatment of disease, my own personal experience in an unusual case may not be without interest.

Miss J. D., age 11 years, school-girl living on a farm, stepped on a nail about the second week in June. The wound healing nicely, seemed to close the incident favorably. However, on July 26 the girl was seized with a severe headache, stiffness of the neck, rigidity of all the body-muscles, vomiting, rapid pulse, fever, loss of speech (due to set jaws), and a swollen painful left leg and foot. The condition becoming worse, Dr. L. was summoned the following day, and being nonplussed he called upon Dr. K. to consult with him on the case the next day. After seeing the patient Dr. K. pronounced it a case of lockjaw. (Since Dr. K. has lost one of his own children by tetanus, his diagnosis is of special value.) He incised the plantar surface of the left foot deep over the point of the original punctured wound and obtained some pus. After the foot was surgically dressed, the patient was placed on the following treatment: Enteroclysis of normal saline solution frequently; hot com-

Dr. A. J. Beyer, Carroll, Ill.

presses; 1-10 grain of elaterium every hour, which, by the way, was conspicuous by its inaction, even after twenty such doses had been given. Within a few hours the child was much improved, the muscles relaxed, and she partook of some food.

At 4:30 the next morning muscular rigidity and trismus again set in. Dr. K., giving a negative prognosis as to life, said that he would rather be released from the case, since he could do no more for the patient. At this time I was called upon to see the patient.

Arriving at the bedside at 10 a. m., July 30, 1910, I found the condition of the patient as follows: Consciousness; dilated pupils; trismus; speechlessness; sardonic grin; froth between set teeth; abdominal muscles hard as a board; fifteen to twenty rose-colored

spots on the abdomen; swollen, hot left leg, with foot surgically dressed; perspiration; pulse 140, tense, full and bounding; temperature, 99.2° F. in the axilla.

A trained nurse being in attendance, with Dr. L. present, I cauterized the wound with 1 : 100 corrosive-sublimate solution, then packed it loosely with gauze saturated with the same solution, and dressed the entire foot with a bandage kept moist with 1 : 1000 sublimate solution.

For internal and hypodermic administration I left the following: A hypodermic, every hour till muscles would relax, consisting of hyoscyamine, crystallized alkaloid, gr. 1-1000, and cicutine hydrobromide, gr. 1-67; and, with the first two doses, pilocarpine nitrate, gr. 1-67. As soon as possible, every half hour, calomel, podophyllin and bilein compound tablet (calomel gr. 1-6, podophyllin gr. 1-6 and bilein gr. 1-8) till six were given, and elaterin, 1-6 grain, with the first two doses. As to result, slight bowel movement at 3 p. m., and a copious watery stool at 6 p. m. Muscles relaxed by 4:30 p. m. Patient talked and partook of food, and slept from 11 p. m. to 2 a. m. next morning, when the hourly doses of the hyoscyamine and cicutine hydrobromide were resumed, given by mouth, and continued till 9 p. m., then every two hours during the night. Copious evacuations this day at 6 and 8 a. m. and at 4 and 8 p. m. At 7 p. m. Dr. L. injected 5000 units of antitetanic serum, which caused a rise in temperature to 101° F. and of the pulse to 96.

August 1 I again saw the patient and this time she was in very good condition, but nevertheless orders were given that the hyoscyamine and cicutine be continued every hour during the day and every two hours during the night unless the patient's pupils should dilate excessively. August 2 and 3 practically the same mode of treatment was continued. The calomel, podophyllin and bilein compound with 1-6 grain of elaterin were given daily to keep the bowels active. August 4 the hyoscyamine and cicutine were administered less often, and directions given to continue the same every three or four hours for the week, and longer, to make sure that no relapse of the spasms occurred.

You may ask why were the hyoscyamine and the cicutine hydrobromide preferred in this case. This was my reason, and no other: Both drugs are sedative and relaxant to the cerebrospinal system; the pilocarpine aids nature in eliminating through the skin as much as possible; the active catharsis eliminates. Thus altogether the chance of recovery was enhanced.

The properties both of hyoscyamine and of cicutine hydrobromide had been utilized by me, with excellent result, about one year previously in a severe case of cerebrospinal meningitis of an infant, hence my conjecture that what was good in the first case of cerebrospinal meningitis might prove good in another one where a similar condition was present in the cerebrospinal system.

Now, here is one for the neck-chain-tied-to-swivel-pole-and-trot-in-circle-skeptic. The antitetanic serum did it? Then why didn't the antitetanic serum do it in the case of a boy nine years old, who also had this disease at the same time and was treated by the most advanced scientific methods, i. e., serum-therapy, chloretone and the like, and by a man who stands second to none as surgeon? But the poor boy did not have vitality enough to come out alive and died about eight days from the time he received the first "scientifics." The scientific method will prove effective exactly in proportion as common horse-sense is mixed with it. There, now!

A. J. BEYER.

Carroll, Ia.

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[Sometimes the patient dies because the name of the disease scares the life out of patient and doctor. I have records of more than one case of "hydrophobia" where the doctor forgot the terror of the name, went to work on the symptoms with modern weapons and won a cure. Did he cure hydrophobia? He cured something that had been so diagnosed. So Dr. Beyer cured something at least very like tetanus. Next time you have a case of either just shut up about the name and go to work—you may also strike one of those cases that "must have-been-something-else-since-it-got-well."

Meanwhile note that sedation by remedies far exceeding the old galenic trash and toxin-

elimination by modern depurants, were the means that won Beyer's success. We claim better results, but we use better means, and our methods are strictly in accord with modern pathology.—ED.]

PERPETUAL MOTION!

A visiting friend had just given a penny to each of the children in the family and complimented them upon the vast wealth they had in their savings-bank.

"Oh, yes," chirped little Jessie. "Every time we take our castor oil without crying mamma gives us a penny."

"And what do you do with all the money?" the visitor wanted to know.

"Mamma buys more castor oil with it."

A NUMBER OF CORRECTIONS

We regret that in recent numbers of CLINICAL MEDICINE, errors have unfortunately been allowed to creep in. For instance, on page 968 of the October CLINIC, under the heading: "An Outline of Successful Treatment," a sentence in Dr. Standard's article on Typhoid Fever reads as follows: "When there is considerable elevation of temperature I use aconitine, in teaspoonful doses every half hour to two hours, as needed." A *solution* of the aconitine containing the proper dosage is, of course, referred to.

In the article on "Quinine Idiosyncrasy," on page 1121 of the October issue, in the fifth and sixth lines, the author is made to say: "I gave her the arsenates of iron, quinine and strychnine with nuclein, four granules three times a day." It should have read: "One granule four tines a day." The reaction of the minute dose, of course, shows the striking character of the quinine idiosyncrasy.

Also in the November number, in the article by Dr. C. A. S. Sims, page 1237, in the third line of the fifth paragraph, the text reads: "Bryonin, 1-67 grain, 1 granule," when it should have read "24 granules;" in the following line the saccharin should be 1-6 grain, not 1-8; in the second line below the picture the dioscorein should be 1-6, not 1-8; then on page 1238, the fourth line from the top the text reads: "Until about 8 granules are taken," which should read, "until 6, etc." Further down in this same column, in the third paragraph, instead of "Directions: One tablespoonful every hour," read "One teaspoonful every hour." In the third line from the bottom, same column, the text reads "physiological suggestion, etc.," when it should read, "psychological."

We want to urge our readers, at least every one who preserves his copies of the CLINIC, to take his pen and see that these errors are corrected. Of course we cannot expect to make CLINICAL MEDICINE mistake-proof, but we should do better than this, and will do so hereafter.

NEGUNDIUM AMERICANUM. MAGNESIUM SULPHATE. ANTITOXIN. COLLECTIONS

May I reply briefly to the editorial comment on my article, printed on page 1007 of the September number of CLINICAL MEDICINE?

Negundium americanum is box elder.

I received my ideas with reference to magnesium sulphate from the writings of Dr. Wm. H. Burgess of Chattanooga, Tenn. He claims that the magnesium drops its sulphur and takes carbon from toxins which always contain carbon.

The statistics of diphtheria of the times before and after the introduction of antitoxin have been grossly misrepresented to help the sale of antitoxin. The great manufacturers are making money out of its sale and of course don't want the medical profession to think that the antiseptic that they add to preserve antitoxin has even a share in the good that antitoxin does, but when the same amount of antiseptic is dissolved in pure water instead of serum and injected hypodermically it does have much of the same effect as antitoxin.

Every doctor having poor-pay patients will find that he can get more money out of them by making them pay spot cash to buy medicines than he can to give credit, as most patients imagine that doctors are making entirely too much money. They are anxious to have the doctor furnish medi-

cine on credit. Tell them that the medicine will cost one dollar or just what you want to make out of the case, that you haven't the medicine on hand and can't spare the money to send for it or buy it for them. Then when they actually pay, go ahead and get the medicine for them. It's simply a case of striking while the iron is hot. I've made good money out of families that had beaten every other doctor in the country and they thought I was smart because they couldn't cheat me.

F. POLLARD

Fresno, Cal.

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[Thank you, Doctor, for the information about negundium, and for the citation to Dr. Burgess's work, with which we are quite familiar.

We must dissent again from your views relative to diphtheria antitoxin. The assertion that this remedy owes its efficiency to the antiseptics it contains is a very old one, but it has no scientific foundation. We had antiseptics in preantitoxic days, and they were administered in every conceivable way, yet the mortality did not diminish. There are few medical facts more firmly established than the value of this antitoxin.

Your suggestion that a much larger percentage of patients can and should pay "spot cash" is "dead right." The notorious business laxity of the average doctor makes him easy "meat" for almost every deadbeat. If we conduct our *business* in a clean, business-like way we shall be more respected. —ED.]

"AN EXPRESSION OF APPRECIATION"

As a facetious friend put it, I was "foolish enough to run for mayor of this city, and unfortunate enough to be elected," and as it was on a mild sort of reform movement, there has been not a little to do to "make good." Thus your letter, asking for "an expression of appreciation," was mislaid and only came to light while I was cleaning my desk today. However, I trust the expression I send will be appreciated all the more because of the delay.

Every number of THE CLINIC, from the first issue, is in my library, and also the subsequent, *i. e.*, rebaptized, issues, although I have never quite forgiven you for changing the name—sort o' like having old landmarks changed, you know.

This magazine has been a whole education to me, medically speaking, and the only trouble with it is that it makes trouble in the family, as it is the only magazine that my good wife and I "scrap" over, as to which shall read it first.

F. A. WALTERS.

Stevens Point, Wis.

HELPING HIM WONDERFULLY

THE AMERICAN JOURNAL OF CLINICAL MEDICINE has helped me wonderfully. I am gaining in my work practically every day; I am curing cases which I know I could not have cured without the knowledge gained from your journal; hence I feel it my duty to add my little mite when requested.

W. W. COX.

Harrold, Tex.

A HINT FOR THE HOLIDAYS

When doctors (and doctors' wives) buy books, why do they not think of the stories, poems and other literary gems which brother practicians are turning out?

Take Dr. Daniel's "Dr. Bruno," for instance. This is one of the most thoughtful and yet fascinating stories that I have ever read. I remember that when I got hold of a copy a couple of years ago it held me the best part of a long winter night. I would like to read it again—yes, I'm going to read it again, and I advise every member of the family to send Dr. F. E. Daniel (Austin, Texas—Daniel of the "Red Back") a dollar and a half for a copy. (If the Doctor doesn't do it, Mrs. Doctor, *you* send in the money.) I am going to tell you something more about the book, one of these days but get it now.

A present for Madam, did I hear you say? Send a dollar to P. F. Volland & Co., this city, for a copy of Dr. George F. Butler's "Sonnets of the Heart." An exquisite thing—the beauty of the verse almost equalled by the artistic charm of the setting.

CLINICAL MEDICINE
POST-GRADUATE SCHOOL of THERAPEUTICS

PART III.—LESSON FIFTEEN

DISEASES OF THE STOMACH

GENERAL CONSIDERATIONS

Indigestion.—There is no more common disturbance than imperfect digestion, and it is by no means easy to frame a definition at once precise and accurate, which will include all forms of this trouble. We know little or nothing of its morbid anatomy. It is absurd to speak of it as an affection of the stomach, for in many cases all parts of the alimentary canal and even of the secreting glands connected with it are affected. In what was called nervous dyspepsia the disturbance of functions is not in the abdominal viscera, but in the higher nerve-centers.

For practical purposes, two great classes of dyspepsias, socalled, may be recognized. One in which there is a deficient secretion of gastric juice, amounting sometimes almost to suppression; the other, in which there is an excessive acid in the stomach, due either to hypersecretion or to fermentation of the food-constituents and the consequent formation of lactic, butyric and acetic acid. There is still another, although rarer, form in which the food is retained but a short time in the stomach, it passing rapidly through the pyloric orifice into the intestines, where it excites peristaltic action and gives rise to a copious evacuation immediately following each meal.

Practically, dyspepsia has its origin either in an imperfect amount of gastric juice or in an inferior quality of the secretion whose solvent properties are impaired. Without resorting to the laboratory, it is, and must be, a difficult matter to settle which of these pathological states of the gastric secretion obtains. But one thing is certain, indigestion of some form or other is almost universal among civilized people, not one in a hundred being entirely free from this ailment.

Indigestion and Diet.—No medical skill can effect a permanent cure of dyspepsia, socalled, unless a diet can be devised which will meet the needs of the patient in the way of nourishment without at the same time overtaxing the digestive powers.

Sometimes the appetite is perverted and must be trained into normal channels. Fasting, judiciously undertaken, is one of the best means for doing this. Such a fast, in a properly selected case, is a good preliminary to a radical change of diet.

Digestion is a chemical process, and the digestive fluids are prepared from the blood, so that we cannot have digestive secretions of high power unless the diet is well balanced. For instance, a diet which does not contain sufficient proteids will not furnish an active gastric juice, and flatulence is the natural result. A one-sided diet is one in which

some single element unduly predominates, as, for instance, when it consists of too much starchy matter, as when potatoes, beans and peas are the three vegetables served at one meal; or when the food contains too little proteid, or, perhaps, is lacking in the different salts required by the tissues, and which are contained in green vegetables; or when consisting relatively of too much fruit.

The proteid substances rank first in importance as articles of diet, and milk (new or skimmed), buttermilk, cheese, eggs, lean beef, chicken, fish, oatmeal, wheat, many of the nuts, and predominantly peanuts (and peanut butter), are especially rich in these nitrogenous elements. Dr. Haig, he of uric-acid fame, has calculated that man weighing 140 pounds will require 1260 grains of proteid per day; if actively employed an extra allowance of 200 grains should be made. Tables have been compiled showing the percentage of proteids in the various articles of food.

Those who find difficulty in taking the necessary amount of food should persevere, adding a little more from time to time until the digestive organs are once more able to manage food in proper quantities and proportion. Strength is derived from food and conserved by good habits. No man can be well until he learns how to eat, and trains his digestive organs to take and dispose of food in quantities to make good the regular waste and furnish energy to run the machine.

Fallacy of Starvation Theory.—The idea, that the less one eats the better, is a doctrine of despair, arrived at by sufferers who have been the victims of ill-directed experiments. Their minds must be disabused of this notion before progress can be made. A man should never go to bed hungry; but neither should he ever eat from habit alone, in the face of positive disinclination. When appetite is lacking at the proper times, go out into the open air and hunt for one. Increase of energy is a sign of improved nutrition. The patient is not in a satisfactory state until this sign is noticed, even though the scales show an increase of weight.

Fruit, as a rule, should be eaten apart from meals. Fruit is of great value in certain diatheses, as, for instance, the uric acid and scorbutic; it agrees well with persons of the bilious and lymphatic temperaments. In the dyspeptic, fruit often causes flatulence, and its place is well taken by green vegetables and tubers, when properly cooked. The alkaline salts contained in these vegetables are of much value in "purifying the blood."

All food should be chewed fine and thoroughly moistened with saliva. Flesh foods are not so good for dyspeptics. Bread is made more digestible by toasting.

Patients suffering from dyspepsia are very apt to treat themselves, cutting off one article of diet after another, but often without success, and in this way reduce their nutrition and diminish their strength without adding to their comfort.

Some of the Symptoms.—The constant irritation which these sufferers from dyspepsia experience from discomfort or pain is apt to lessen their power of attending to other things, so that they lose interest in outside affairs and have less power of attention, and are tempted to concentrate their thoughts upon themselves. When they attempt to read or think they feel dull and heavy and they either do not comprehend as readily or remember as distinctly as they did when well. Moreover, they are likely to become irritable, snappish, such fits of irritability often alternating with a feeling of depression and languor. Sometimes they also complain of singing in the ears or of giddiness and a tendency to fall. These symptoms, however, are more frequent in elderly people and probably are associated to a considerable extent with atheroma. When they occur in younger persons free from organic disease, they are more suggestive of tobacco smoking.

How and How Not to Eat.—In the treatment of disorders of digestion, it is important to lay down rules for the patient as to when food should be eaten, how it should be eaten, and what should be eaten.

The general experience of mankind shows that four or five hours should intervene between meals; but under certain conditions it is advisable to have something to eat as often as every two hours. In fever, when the waste of the body is great, every two hours

is the time usually suitable for the administration of food. However, when given at such frequent intervals, the food must be taken in small quantity, lest indigestion result.

As to the manner of eating, the patient must understand that he should eat slowly, and at all times thoroughly masticate and insalivate his food before swallowing it. Hurry at meals, says Lauder Brunton, is a frequent cause of dyspepsia, and worry or mental exertion immediately after meals is another. In dyspepsia a certain time should be allowed between the meal and the return to work, whether bodily or mental.

Rest before eating is also an important factor, especially rest just a few minutes before the evening meal, whether it be called dinner or supper; for this is the time in which the body in general and the stomach in particular are likely to be exhausted.

Liquids at the Meals.—Much fluid at a meal, by diluting the saliva and the gastric juice, is disadvantageous. It is not so injurious when taken immediately after the meal; still, an hour before meals is better, and the best form in which it can be taken in hot water. By drinking a tumblerful of hot water an hour or so before eating, not only are the remnants of the previous meal washed out of the stomach, but, also, much of the water becomes absorbed. This prevents thirst, obviates the necessity for drinking at meals, while, instead of the gastric juice being diluted by the water which would then be drunk and digestion thereby retarded, the water already absorbed makes possible the free secretion of saliva and gastric juice, and thus accelerates digestion.

There is an exception to the foregoing rule, though. If the stomach is actually dilated, and especially if this be due to pyloric obstruction, water, even if hot, will remain in the stomach for more than an hour after ingestion, and instead of accelerating digestion it will interfere with it. In such cases the long interval which usually elapses between the evening meal and breakfast may allow the stomach to become empty, so that breakfast may be eaten with relish and digested with comfort. But under such conditions a tumbler of water, either hot or cold, taken on rising (being retained) may delay digestion and do more harm than good.

Relation of Proteid to Carbohydrate Rations.—The experience of mankind has shown it to be advisable, to a certain extent, to separate the proteid from the farinaceous meals. Thus it is a very common practice, at any rate among English-speaking people, to have a farinaceous meal with a small quantity of proteid for breakfast; a proteid meal at luncheon; a very little farinaceous food in the afternoon; and again a proteid meal in the evening. Thus, we find that at breakfast bread and toast with some easily digested proteid, such as egg or fish, is very commonly taken; or a small quantity of a sparingly digestible proteid, such as fried bacon, of which the hydrocarbonaceous fat frequently forms a large portion. At lunch the main part of the meal should consist of meat, although a moderate quantity of bread or vegetables may be taken with it. The afternoon meal should consist of a little bread and butter, and in the evening there should follow another proteid meal like that of lunch. In cases of dyspepsia it is often useful to separate the proteids from the farinaceous foods more completely, inasmuch as the time for digestion of the two is different, while the portions of the digestive tract in which digestion of the two kinds of food takes place also differ.

A dyspeptic patient's *breakfast* should consist, predominantly, of dried toast, rusks or stale bread, with a very little butter, the latter of the very best quality. If the digestion be very bad, the bread may have some hot milk poured upon it and be eaten in this way without butter. Still, ordinarily more milk, either warm or cold, may be taken with the toast, many people being able, without injury, to take with the milk sufficient tea, coffee or cocoa to flavor it. If the stomach be able to bear it, a soft-boiled egg or a piece of fish may be added.

The *midday meal* should consist chiefly of proteid food, such as fish, fowl, eggs or meat, together with some stale bread. One of the most readily digested fishes is boiled whiting, for its fiber is very soft and easily disintegrated. Codfish also is good, but it is somewhat harder and requires more careful mastication. Boiled or broiled sole

is excellent; but if the sole be fried, the skin must be carefully removed, as well as the bones. Sauces, containing as they do fluid fats, are apt to disagree; it is safer to take the fish simply with salt and stale bread. In many cases it is better to spread a little good butter upon the bread and take that with the fish than to use sauce or melted butter. In the same way fowl may be eaten with stale bread. In some cases eggs in the form of omelet are tolerated, but quite as frequently eggs are liable to cause biliousness. A chop or steak sometimes suits well, provided the same be thoroughly masticated and all the stringy parts rejected.

As already stated, it is best to drink a glass of hot water an hour before meals, but sometimes dyspeptics cannot or will not do this. Such persons may be allowed half a tumbler of water, this to be sipped after the lunch is over. Effervescent water to many persons is more palatable and more stimulating than plain water; and it may be used provided it does not give rise to flatulent distension, as in many instances it does. As a rule, wines and beers do not agree well with dyspeptics.

For the *afternoon lunch*, hot water may be drank again, flavored by a piece of lemon floated upon it; and a small piece of bread or biscuit may be taken with it. Weak tea is more palatable, or milk and water, and if found not to disagree, either the weak tea, or the milk flavored with tea, may be used in the place of hot water.

For the *evening meal*, at 7 or 7:30, food similar to that of the luncheon should be taken.

After the digestive difficulty is less severe, the patient may return to a more ordinary diet, mixing the proteid and farinaceous foods in larger quantity.

Care must be taken by all dyspeptics to avoid an excess of sugar, which is very apt to create acidity. A good general rule also is to reject skins and bones, and all strings, stones and seeds. The bones of fish and the chips of bone that occasionally occur in curry or hash act as irritants, while skins of every kind, whether of fish, fowl, fruit or vegetable, are indigestible. All such articles should be avoided, although not infrequently coarse substances are rendered acceptable by passing them through a fine-set chopper.

About Mastication.—An excellent rule is that of the late Sir Andrew Clark of England. The mouth contains, or ought to contain, thirty-two teeth, and to every mouthful of food thirty-two bites should be given. If the teeth are imperfect, even this number is not sufficient, and as many as sixty-four or ninety-six bites may be required to comminute properly a single morsel of meat. In other words, the Fletcherizing of food is unquestionably of value. Of course, this thing can be overdone.

Another rule which is sometimes of great service in dyspepsia is to insist that before the food is swallowed it should be so finely masticated and so thoroughly mixed with saliva that it shall be of the consistence of cream and would pass through a sieve without leaving a residue. It is, however, very much easier to insist upon such procedure than to have it carried out, and it is only in very severe cases, and especially those where the pain is so great as to suggest the presence of gastric ulcer, that patients will do so. Indeed, they often find the rule so troublesome that mere discomfort from their trouble will not suffice to make obey, doing so only when suffering severe pain, and learning by experience that obedience will prevent these attacks, while neglect causes them to return.

Keeping the Body Warm.—Dyspepsia often results from undue exposure. There are four places on the person that require special warmth, namely, the back of the neck, the front of the abdomen, the shins, and the feet. Many persons, after sitting in the draught which always exists in cold weather between the door and the fireplace, radiator or stove, will suffer from dyspepsia, and then wonder what article of food has disagreed with them. This draught should be carefully avoided by raising the feet above the level or by sitting outside the influence of these cool air currents. Thick boots, especially boots with cork soles, woolen stockings, and gaiters of cloth or leather protect the legs and feet from cold; and warmth to the back of the neck may be afforded by a muffler or high collar.

Support of the Abdomen Useful.—Another aid of great importance in cases of dyspepsia is an apron of chamois leather and flannel, or a belt around the abdomen, which should be worn in such a way as to give both warmth and support; support, in fact, is especially needful in those cases where the abdominal muscles are lax and the belly is pendulous. The commonest kind of belt is made either of flannel or of knitted wool; but a silk scarf is perhaps a little more comfortable. If should be long enough to go three times around the body, and it may be put on with any comfortable degree of tightness. In cases of floating kidney the belt may be provided with a pad or truss.

Importance of Rest, Physical and Mental.—It is important to avoid, as far as possible, fatigue before the repast, and also to get rid of all worry or thoughts about business during meals. Some people damage their digestion by walking from their work with the notion of getting an appetite. The extra labor caused by this finishes up the patient already exhausted by his daily work, and lessens the digestive powers still more. Twenty minutes of rest, at least, after getting home is a useful restorative and is advisable for dyspeptics, especially for patients at or above middle age. On the other hand, if his occupation be of a harassing and anxious kind, it is sometimes useful for the patient to walk home instead of driving, thus possibly getting rid of his anxiety and worry by this exercise, provided it is not too exacting. If rest can be taken on arriving home, the disadvantage caused by the extra bodily work in such instances may be more than compensated by the mental relief.

After the meal is over, rest is required both for body and mind; and active exertion, either bodily or mental, is injurious; it is distinctly advisable to rest (better taking a nap) half an hour or more if possible. During this time pleasant conversation or light reading or a pipe may divert the mind from care.

Drugs that Are Serviceable.—The medicines that have been employed in the treatment of dyspepsia and other stomach disorders are almost innumerable; they may, however, be divided into a few classes. First there are those that stimulate the secretion and movements of the stomach. Second, those which by their local action have a sedative action on the stomach. Third, those which act upon the general nervous system. Fourth, those which supply digestive material. Fifth, those which lessen abnormal decomposition; and sixth, those which aid in elimination.

Among those remedies which directly stimulate the stomach, one of the best is *sodium bicarbonate*. This should be given fifteen, twenty or thirty minutes before meals, and, I think, it may be combined advantageously with some bitter.

Another exceedingly useful stimulant is *rhubarb*. The old-fashioned plan which makes the patient chew his stick of rhubarb, in which he got a solution of its active principles in the alkaline saliva, is a good one, but many persons dislike this way of taking it and prefer the rhubarb swallowed at a gulp, with an alkali taken before meals.

Sodoxylin is another excellent remedy, when an alkali is required. An old combination, yet a very good one, is bismuth subnitrate (or the carbonate), 5 grains; sodium bicarbonate, 5 grains; pulverized rhubarb, 1 grain; pulverized nux vomica, 1-2 grain; pulverized cinnamon, 1 1-2 grains. This powder is to be dispensed in a cachet, two such cachets to be taken with a mouthful of water three times a day, twenty minutes before meals. Of course double the foregoing amount may be put into one large-sized cachet so as to contain 10 grains each of the soda and bismuth, while also the proportions of the several ingredients may be increased or diminished. Thus, if for instance the quantity of rhubarb in the above formula causes the bowels to move too freely it may be lessened as required.

A great deal has been written lately about the uselessness of vegetable bitters and possibly their utility has been exaggerated. Nevertheless, in many cases they certainly seem to be productive of great benefit.

In cases of *atonic dyspepsia*, such as we see ordinarily in hospital patients who complain of much flatulence, and who present a certain definite group of symptoms, quassin and the triple arsenates, given before meals, frequently appear to be more beneficial than the alkalis. The group of symptoms in the condition named, consists of a

pale, flabby tongue, furred on the dorsum and marked with teeth at the edges; pain in the epigastrium, striking through between the shoulder-blades; much gas in the stomach; flushes of heat; black specks before the eyes; and pain at the top of the head. Here, if constipation be present, an effervescent saline laxative in the morning greatly assists the action of the triple arsenates and quassin.

In *irritable dyspepsia*, bismuth is one of our most useful remedies. It may be given in the form of a powder. But some patients object to powders and prefer the liquor of bismuth, which may be given in doses of 1-2 to 1 dram, with some aromatic spirit of ammonia and a carminative water. The subnitrate of bismuth does not go very well with sodium bicarbonate in an aqueous mixture, as decomposition occurs, with the formation of carbonate of bismuth, nitrate of sodium, and evolution of carbon dioxide gas, which, if the quantity of bismuth be large, may be so great as either to blow the cork out of the bottle or even to burst the bottle itself. However, if the reaction is allowed to complete itself in the mortar, before the mixture is bottled by the pharmacist, this difficulty is obviated.

When much pain is associated with the taking of food, 20 or 30 minims of the compound tincture of camphor may be added to the bismuth mixture with great advantage. When there is great pain and acidity after meals, it may be relieved by dissolving a teaspoonful of sodoxylin in water and sipping this with a spoon until the pain is relieved. This, of course, is but a palliative measure, but it gives relief at the time.

Among the drugs which assist the function of digestion through their influence on the nervous system, the foremost place must be yielded to strychnine. Strychnine is a most useful adjunct to antidyspeptic remedies in most cases of feeble digestion.

Among those substances which are used to supply digesting material, the most important are hydrochloric acid and pepsin, to which, perhaps, rennet should be added. A solution of 10 minims of dilute hydrochloric acid or of dilute nitrohydrochloric acid appears to assist digestion in many instances where only the acid secretion is deficient. It is frequently given with a bitter shortly before meals, as then it seems to stimulate the appetite; but it may also be given immediately after meals, with only strychnine or with the further addition of pepsin.

In some cases rennet appears to be deficient in the gastric juice. The exact purpose of this ferment in ordinary digestion has not yet been ascertained; but that it has some important function there seems little doubt.

Among the remedies which tend to prevent *fermentation*, one of the best is the combination of the three sulphocarbolates. *Creosote* has a similar action, so also has oil of cassia. For preventing decomposition in the intestines and flatulent distension, the sulphocarbolates prove very efficient.

The accumulation of fecal matter in the intestines must be prevented, and the *bowels must be kept regular* by means of purgatives. Either the anticonstipation pill, or if there is a sluggish action of the bowel, calomel, bilein and podophyllin followed by saline laxative, can be employed with advantage. The unloading of the liver is a very important matter. The mode of action of calomel, podophyllin and bilein upon the liver is not perhaps, thoroughly understood, but clinical experience has left in me no doubt whatever that it is of the greatest use in relieving many of the symptoms of dyspepsia.

The pains to which I have alluded as probably dependent upon adhesions of the intestine, and occurring in gouty or rheumatic subjects, are well treated by salithia, sulphocarbolates, and sodoxylin. Although they may be increased by irritating articles of diet, such as nuts, figs and the like indigestible substances, yet diet does not exercise nearly as much influence over them as do exposure to cold, indulgence in acid wines, or any other excess that brings on an attack of gout or rheumatism.

In treating cases of indigestion or its consequences due to *injurious mental influences*, the depressing cause must be removed if possible. If this cannot be done then change of air and scene, and exercise short of fatigue and in the open air, are serviceable. Potassium bromide either alone or combined with ammonium bromide, is useful both in lessen-

ing the sensibility of the nervous system to worry, and in producing sleep.

It is sometimes difficult to distinguish between depression that may be called purely mental, and a depression due to physical causes. *Mental depression* may be due to disorders of the liver, but also to trouble of the genital organs. These are apt to give rise to mental depression and to digestive derangement. It is difficult to say whether the genital troubles give rise to mental depression through the medium of the digestive system, or whether they disturb the digestion through the emotions. At all events, dyspepsia due to uterine and other genital disturbances is not to be overlooked.

Uterine dyspepsia presents the usual symptoms of nervous dyspepsia; epigastric pain, acid eructations, and sometimes vomiting after meals. The bowels are not unfrequently much constipated. Here also the first thing to do is to remedy, if possible, the condition of the uterus, next to lessening the nervous excitability by bromides or other sedatives, and to clear out the intestines by means of purgatives and to keep them clean with the sulphocarbolates.

We are sometimes too much inclined to regard digestion as a process which goes on in the intestinal canal only, and to forget how very intimately this phenomenon is related to the other functions of the body. But we cannot either rightly understand the pathology of indigestion or the action of remedies, unless we constantly bear in mind the intimate relation which exists between the alimentary canal and the rest of the body.

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ALCOHOLIC AND OTHER BEVERAGES AND GASTRIC DISEASE

Alcohol.—Nobody doubts that alcoholic liquids taken before meals arouse the appetite and more food is taken than without the stimulant. Soon, very soon, the habit is formed, and the meal is not relished without the stimulant. Meanwhile the digestive capacity is impaired, as alcohol precipitates the pepsin from the gastric juice, and the growth of connective tissue chokes off the gland cells of the gastric mucosa. Even before this the steady and moderate drinker is learning to depend on the alcohol and to eat less real food. For while alcohol quells the sense of hunger and fatigue it is not a real food or anything but a very objectionable and imperfect substitute for it.

From the stomach the alcohol is absorbed into the roots of the portal vein and carried to the liver. This vigilant guardian of the portal of life is at once aroused and its every energy is directed to the interception of the poison. So imminent is the peril that the unassimilated proteids from the food that would ordinarily be intercepted and worked over here before being allowed to pass into the circulation are neglected, and traverse the blood, increasing the quantity of albuminous matter eliminated by the kidneys. Hence the erroneous idea that alcohol increases the elimination of toxins. From first to last the good effects of alcohol are a delusion. It is a paralyzer, a poison, a depressant, a disease inducer, never a true stimulant or a cure. If men want to take alcohol let them do it honestly, acknowledging that it is because they like it, and not try to hide behind the pitiful excuse that they look on it as a useful medicine.

Not the least recommendation of the active principles in medicine is that they enable us to do away with the whole line of alcoholic tonics, the medicated wines, elixirs, tinctures and extracts, which whatever good they may have done proved potent agencies in arousing a dormant taste for stimulants.

Mineral Waters.—The popularity of the natural mineral waters seems to increase. Their benefits lay largely in the rest and recreation a residence at the springs affords, the opportunity to enforce the laws of personal hygiene when the patient has nothing else to do. Apart from this the vogue of the natural waters may be ascribed to the general impression most people have—and physicians are not to be excepted—that there may be something in these waters, placed there by Nature, that is lost when the artificial salts are substituted. The possibilities of suggestion are therefore enlisted in favor of the spring as against the chemist.

The objections to this theory are many and weighty: The waters of springs and wells

are apt to be impure from surface drainage, although I would not go so far as Cyrus Edson, who, while at the head of the New York City Health Board, asserted that there was not a spring or well in the country whose water was fit to drink. I have examined many of the springs, and know of none that are really ideal in the protection afforded the water except those at Poland, Maine. Here the managers have dug down to the granite through which the waters rise, and built walls of granite blocks and cement up to the surface. On these are cemented plate glass cases, so that the only communication with the outside air is through the delivery pipe that carries the flow to its receptacles. Any impurity reaching the water must filter through the solid granite. The result is that these waters are purer than the usual grade of distilled water furnished at some pharmacies.

Compare this with a spring I once visited—it opened in the middle of a pasture field, and at my visit a cow was standing in the spring.

Other objections are the variability of the natural waters owing to rainfall, etc., and the complicated nature of their action from the presence of more than one—often many—ingredients. In one celebrated group of springs the proprietors have found it necessary to issue warnings against the indiscriminate use of the waters because the iron in them is so active that apoplexy may result from their taking by persons not anemic. Alum, sulphur, arsenic and alkalis are not remedies to be taken heedlessly, and even magnesia may do harm. The most celebrated magnesia spring in the country is well known by its habitues to induce insomnia if the water is drank during the evening.

Here as with the drugs of plant origin the tendency of modern science is to substitute knowledge for superstition, credulity and ignorance, and to employ the various salines found in the waters in a state of chemic purity, and combine them when desired in such quantities and proportions as each case may require. As the practice of medicine approximates an exact science and art, chance is eliminated, calculation replaces guessing, and the demand is for exactitude in diagnosis and in therapeutics. This applies as well to the quantity of water that should be taken with the medicinal salts, a matter of no small moment.

The Use of Drugs in Gastric Disease

As in other departments the student of gastric disease finds himself facing pathologic conditions demanding correction rather than disease entities appreciated by their names and calling for specifics directed against such a primitive conception. Instead of a serum for the cure of gastric catarrh we seek a remedy for deficiency of motility or secretion, relaxation of connective tissue, or mycosis; and we learn to begin by supplying to the impaired organ a nutritive fluid freed from that strain of fecal impurity that is so potent in disordering its functional operations. No organ suffers more from the influence of fecal toxemia than the stomach itself. No treatment can be effective that looks to this apparatus alone and not as a part of the body as a whole and as influenced by the state of the remainder. The extreme sensitiveness of the digestive organs is shown by the quick response to strictly psychic impressions. Vomiting may instantly follow a disgusting sight or thought. Regulation of intestinal peristalsis is materially aided by carrying a buckeye.

Useful Drugs.—Following, I give a few brief suggestive notes showing the large number of remedies useful in diseases of this class and some of the indications for their use.

Atropine relieves the pains of gastralgia, and those of gastritis; stops the secretion of the acid gastric juice; and checks the vomiting of the choleraic group. In minute doses it favors bowel action by restraining inhibition; in larger doses controls excited peristalsis.

Anemonin relieves painful dyspepsia with coated tongue, headache and nervous depression; the subacute gastritis of phlegmatics with white tongue, heartburn, nausea, flatulence and absence of taste.

Berberine contracts relaxed connective tissue, and cures gastric dilatation, alcoholic catarrhs, and atony of mucous and muscular elements of the walls of the stomach.

Bismuth salts allay irritability and inflammation, acidity, nausea and all irritative conditions; useful for children and alcoholics.

Brucine restores gastric tone, by its local anesthetic power subduing pain and irritation, and arouses both appetite and the digestive powers.

Calomel subdues all forms of vomiting, especially that due to ptomaines, and it acts as an antiseptic; incites all digestive secretions.

Creosote is a useful antiferment and antiseptic, and allays vomiting dependent thereon; for pains following food; may relieve gastric ulcer.

Cornin is a good general tonic, for periodic attacks, tones the muscular fibers; best when sex weakness accompanies.

Codeine may be used in minute doses for pains or to check peristalsis but there is danger of a habit.

Caffeine in small frequent doses is useful for headaches dependent on gastric disorders or fatigue.

Cocaine eases the suffering from gastric ulcer and contributes to a cure; be careful and do not tell the patient what it is.

Cerium oxalate when chemically pure is the best antiemetic, especially in pregnancy; give small frequent doses.

Ergotin stops hemorrhage of ulcer, as does atropine quicker; the former relieves visceral neuralgias also; full doses.

Emetine is the best remedy to empty the stomach—necessary very often; and in small doses to restore healthy digestive secretions; gr. 1-67 every two hours.

Eucalyptol is a good antiseptic but no more; for fermentation.

Glonoin quickly relieves the pains of gastralgia.

Hydrastine contracts small blood-vessels; for gastric hemorrhages, atony, to tone secretion and muscular activity; for relaxed catarrhs following alcoholism, and for dilatation.

Iodoform for pain and irritability of gastralgia, ulcer and catarrh; dysphagia of tubercular laryngitis.

Iron tannate useful for anemia of gastric ulcer.

Juglandin to incite digestive secretions and keep the bowel clear; like rhubarb but easier to take, and small dose.

Euonymin sometimes seems a specific laxative in many forms of gastric disorder.

Iridin is a good laxative when the tongue is pasty, breath bad, mouth foul, liver sluggish.

Lithium salicylate is useful in fermentative acidity; give small doses very often.

Manganese oxide quickly subdues heartburn and acidity.

Morphine may be given hypodermatically for the acute pain of toxic gastritis.

The yellow oxide of mercury, in minute doses, has been used with success for chronic gastritis.

The bichloride of mercury, gr. 1-134 every hour or two, has succeeded with gastric ulcer and some dysenteries; also for insomnia of gluttons.

Pepsin serves to initiate digestion, when the stomach can carry it to completion. It also has an independent power of allaying irritation and vomiting.

Podophyllotoxin, a small dose at bedtime, often does good; especially if the stools are dark and offensive.

Quassin is the best general tonic for the stomach, and improves the appetite if held to small doses before meals.

Quinine hydroferrocyanide is very useful as a tonic and for periodic forms of gastric troubles.

Rhubarb is invaluable for the innumerable pains and frets of the little ones and incites healthy secretions besides emptying the bowels.

Silver oxide relieves many pains from gastric catarrh, ulcer and neuralgia, and cures ulcer sometimes; good tonic in dilatation; for alcoholics; allays vomiting.

Solanine eases the pains of gastralgia better than bromides and without their disadvantages; subdues nervousness.

Salicylic acid, gr. 1-6 every five to ten minutes, for fermentation, the sort that precedes rheumatism; for acidity.

Sodium arsenate for heartburn or irritation, gastralgia, catarrh, vomiting, especially of drunkards, and for lientery.

Strychnine in small doses for atony, gastrodynia, gastralgia, to give tone to mucosa and muscular fibers, very small doses every ten minutes for acute catarrhs, with headache or nausea; less often for chronic forms; for

alcoholics; with arsenic for alcoholic morning vomiting.

Tannic acid sometimes does good in relaxed states with free secretions.

Zinc oxide relieves the pains of gastralgia that come after taking food; for dilatation from beer; for ulcer; for vomiting of many sorts.

Zinc cyanide relieves most all forms of gastric pain quicker and less objectionably than do opiates, even codeine.

Zinc sulphocarbolate for flatulences, nauseas, acidities, fermentations, mycoses, choleras, ulcers, and the rest.

Calx iodata for sudden and anguishing gastric pains due to acidity, etc., for fermentations, acts almost instantly.

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SOME POINTS ON THE ELECTRO-PHYSIOLOGY OF THE STOMACH

The study of chemistry is so closely related to that of electricity and magnetism that the three subjects cannot well be separated. Possibly it is fairly well known that electricity and magnetism are inseparable, but the intimate relationship existing between electricity and chemistry is oftentimes completely lost sight of. "Like polarities repel, unlike attract," and, so, if two substances have a chemical affinity for each other, it is because they are of unlike polarity.

Acids are electronegative; alkalis and bases electropositive; consequently, being *unlike*, they combine to form another compound. Oxygen and hydrogen are so unlike that they combine ravenously, the compound, on condensation, forming a fluid—water.

According to the law of conservation of energy, no forces are created, none are lost. Therefore, if we gain force in one direction, it must be by the loss of force in some other direction. Hence, chemical energy is not lost, and it is a physical impossibility to have chemical decomposition in any form without the generation of electrical energy. The seidlitz powder dissolving in the glass with effervescence produces electrical energy, making a battery cell if we had some means of conveying it out of the tumbler.

Let us emphasize: *Chemical decomposition always begets the generation of electrical energy.* And, further, the chemical decomposition that *we know* takes place in the stomach makes man a complicated electrical machine.

Everything taken into the stomach is decomposed electrolytically; the acids going toward the blood stream, the alkalis to the mucous lining of the organ. The acids are formed by the oxygen set free in the decomposition of the fluids. Oxygen is an acid maker. The alkalis are the result of the evolution of hydrogen, which is given off in just twice the volume of the oxygen. Hydrogen and the alkalis are irritants and, acting upon the nerves supplying the muscular coat, cause the latter to contract.

To the casual student of this subject it would seem a strange anomaly, inasmuch as the alkalis, during electrolytic decomposition of the stomach-contents, go toward the mucous lining of the organ, that this part should be distinctly acid—as is well known. For the elucidation of this problem we are indebted to Morgan ("Electro-Physiology and Therapeutics," page 231), who has definitely proven that the electrolytic action of the current of an element formed of several moist conductors always is so directed that it continually seeks to destroy the very heterogeneities on which its power depends. Thus the alkali follows the positive, the acid the negative current, the former moving in the liquid from alkali to acid, and the latter pursuing the reverse course. This, then, accounts for the well-known alkalinity of the blood and the acid quality of the stomach.

If the stomach-contents are not in a fluid condition, polarization ensues. Polarization means a reversal of the normal currents, and consequently carries the acids, which are sedative in action, to the muscular walls of the stomach, causing inactivity of the organ. This is why a glass of water oftentimes relieves a bad case of socalled "heartburn."

It is quite a popular belief that all the oxygen the blood receives is from the air taken into the lungs; but it is a fact that at least an equal amount of oxygen comes from electrolysis of the fluid contents of the stomach. Water in sufficient quantities taken

into the stomach at the proper time has as much to do with making good blood as the breathing of fresh air.

It is also a fact that fluids conduct best when warm, and, so, if the water taken into the stomach is very cold, electrolytic decomposition of the contents will be retarded proportionately. As a rule, we do not drink enough water, and that we do drink is too cold.

Is it not strange that we seem to know so little about the treatment of this important organ? I was lately informed by a prominent specialist that in hyperchlorhydria he always administeres an *acid*, with good results. Another physician in this line of work tells me it is the general belief that the muscular walls of the stomach do not respond to electrical stimulus; and still another, in a recent article, observes that hyperchlorhydria is a "myth."

Isn't it time that more study be given to the electrophysiology of the organ?

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COMMENTS ON THE LESSON

With this number we bring to its close another year of hard work. It has been a good year, a pleasant year, for us, and we hope that it has been a profitable one for you. Our only regret is that so small a percentage of the readers of CLINICAL MEDICINE have shown an active interest in the School. The enrollment of students is entirely too small. While we get many letters from physicians who say that they go through the lessons every month, many of these do not send in examination papers. We really should have several thousand students actually enrolled. Why cannot we have these next year? Will you come in, Doctor? Can't you persuade some of your friends to join you?

How can we make the course better? We shall appreciate it if our subscribers will write personally to the Director, Dr. Butler, telling him where they find it deficient and just what they want.

For the information of new subscribers we will say that the handsome certificate of the School is given to any legal practician of medicine who satisfactorily completes one year's work by correspondence, the quality of this being shown by the answers to the examination questions given at the end of each month's lessons. The answers are to be sent to Dr. George F. Butler, Director of the School, for grading. The student may begin his work at any time, but preferably at the beginning of the year. He should study the lessons in the order of their appearance.

Following we give some comments on the lesson on dysentery. Next month we shall continue the study of the digestive diseases.

The Treatment of Dysentery.—Dr. T. H. Line, Marquette, Nebraska, gives us his routine treatment for dysentery as follows:

"As a routine treatment for all cases I have never found anything better than an emulsion of castor oil, turpentine and the yolk of an egg in water as hot as can be borne and used as an enema. While this is an old standby of mine I think lots of flushing the bowels with hot water or hot barley water. If it is necessary to feed a patient I generally do it by enema, using whatever is thought best in a given case. I have long since had it beaten into my head by practical experience that the less that goes into the mouth in these cases the better for them; even water is better given per rectum. However, this is only a whim of my own, but I am in the habit of handling my cases my own way, even though it does not agree with the teaching of some great big fellow in Chicago or elsewhere. Still I am egotistical enough to make the statement that with the same facilities in handling cases I will show as great a percentage of recoveries as does the professor of great reputation, silk hat, kid gloves and patent leathers."

Not a particle of doubt of it. Indeed, in our opinion, there are thousands of country doctors who are doing clinical work of the finest quality, showing discrimination in the selection and skill in the use of remedies which really would put to shame many of the "professors," too many of whom follow in the rut of precedence.

Another Man's Method in Dysentery.—Dr. John Stuart, Monon, Indiana, who always writes us very interesting papers,

says as regards his treatment of dysentery: "My treatment depends upon the conditions present. I generally begin with a good dose of castor oil to remove offending material in the bowels. Then in sporadic dysentery I give: normal tinct. aconite, gtt. 7; normal tinct. ipecac, gtt. 10 or 12; water, ozs. 4. Directions: A teaspoonful every hour. Aconitine and emetin may take the place of the aconite and ipecac. The aconite reduces the fever and the ipecac relieves the irritation. Other conditions are met as they arise. If the tongue is red and moist, indicating an irritable condition of the stomach, I give bismuth subnitrate, in such doses as the case may demand. When the tongue is red, magnesium sulphate in small doses every hour gives quick results. I almost always use a colon tube and wash out the colon. I generally put a small amount of tincture of opium in the water. By this course of treatment I have always had satisfactory results. With the above I almost always give the sulphocarbolates. When there is exhaustion, small doses of strychnine sulphate."

I am sure that the doctor will use aconitine and emetin exclusively, in place of aconite and ipecac, when once he becomes accustomed to them. They assure accuracy of dosage and—results. See the Kansas State Board of Health report on tincture of aconite, published last month.

More About Dysentery.—We will quote again this month from Dr. Theo. Schmalzriedt, of Detroit, Michigan. He writes:

"My usual treatment for acute dysentery may be summed up as follows: Rest, attention to hygiene of patient and surroundings, boiled drinking water, heat locally if agreeable, liquid diet, with such things as barley or rice water, beef juice, milk and lime water, all in small quantity frequently repeated, say two ounces every two hours if stomach will tolerate them. Eliminate fecal accumulation with calomel, laxative salines, enemata of turpentine in warm water, then boric-acid irrigations repeated frequently enough to keep the intestinal tract clean.

"Internally I give the sulphocarbolates in dosage sufficient to maintain intestinal asepsis. Atropine is used to sedate the excessively secreting intestinal glands; and cicutine, codeine and hyoscyamine to quiet excessive peristalsis. If necessary for pain I use morphine, giving at the same time pilocarpine to maintain skin and kidney function and being particular to secure sufficient intestinal elimination while using the morphine. I use emetin, though not to nauseate, because I believe it to have a corrective influence upon the intestinal secretions. Strychnine I use preferably hypodermically, if needed for lowered vitality, because its use by the mouth seems to irritate the gastric mucosa. For ulcerative conditions I have used silver-nitrate irrigations, grs. 20 to the pint, with doubtful benefit."

We regret that we are compelled to omit a number of most interesting comments. We find these one of the most interesting features of the course and we should be glad indeed to give more space to them. We wish especially to invite our students to describe the methods of treatment which have been evolved in their own work. Case reports are always interesting and we would be glad to have many of them.

EXAMINATION QUESTIONS

1. Write out a brief clinical classification of the common diseases of the stomach.

2. What can be learned by chemical and microscopical examination of the stomach contents?

3. What is meant by the word dyspepsia?

4. What is the role of hydrochloric acid in the digestive process?

5. What is the proper relation in the quantities of fats, carbohydrates and proteids?

6. What do you mean by the word "calorie"? How many calories are required daily by a man of average weight doing average work?

7. How much fluid should a person in average health take daily, and in what form? What directions do you give about drinking at or near the meals?

8. When should alkalis be given to dyspeptic patients and in what form?

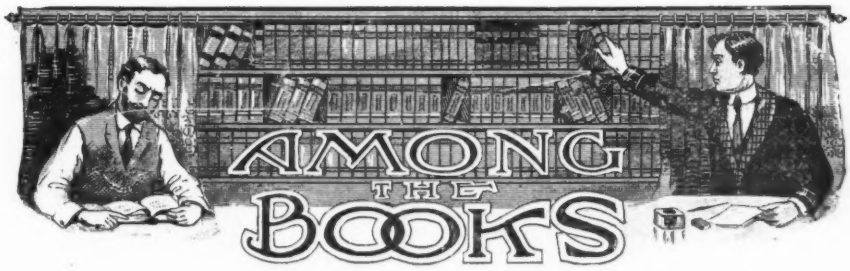
9. To what cases would you give acids and how?

10. Outline the therapeutic application of the digestive ferments, telling of those you most commonly use?

11. What remedies are most useful in cases of gastric irritability, and how should they be used?

12. What remedies may be employed to check fermentation and gas formation?

13. What value, if any, have the alcoholic beverages in the treatment of diseases of the stomach?



COOPER'S "SEXUAL DISABILITIES"

While our November number containing the review of this book (page 1261) was on the press, there came to hand a copy of the second edition of the same, enlarged to 204 pages. The text of the first edition has been revised, and new matter has been added to most of the chapters. The price of the new edition is $2.00. We endorse the little volume for its excellent treatment of a difficult problem and hope that it may prove of benefit to many physicians, and thus to their patients as well.

BONNEY'S "PULMONARY TUBERCULOSIS"

Pulmonary Tuberculosis and Its Complications, with Special Reference to Diagnosis and Treatment, for General Practitioners and Students. By Sherman G. Bonney, A. M., M. D. Second edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1910. Price, cloth, $7.00 net.

The first edition of this excellent textbook on pulmonary tuberculosis was published but two years ago, in July, 1908, and experienced a reprint in August, 1909. The fact that an entirely new and revised edition was called for so soon, and still more, the further fact that the author has found it possible, besides his many other duties, to examine and sift the enormous current literature on the subject in this brief space of time, is a cause for congratulation. Only one who, like The Bookworm, has attempted to keep track of and master this immense mass of literature, a surprisingly large proportion of which is of interest and importance, can appreciate the splendid result attained in the volume now before us.

Dr. Bonney has written primarily for the general practician and it would, therefore, be useless for the specialist to expect detailed discussions, with the complete literary evidences and references, of moot questions. The subject-matter, however, has been presented fairly and conservatively so far as it has been accepted as settled, and questions which are still *sub judice* have received an equally fair treatment, although they could, of course, not always be discussed at length.

The author calls attention to the fact that sociologically the prevention and limitation of tuberculosis has, of late years, been accorded more attention than the treatment and, perhaps, cure of the tuberculous. He points out very justly that sight has been lost of the fact that the patient with advanced open tuberculosis is far more in need of instruction and care to prevent his being a source of danger to his surroundings than one in the incipient stages. And, yet, it is the latter who gets most of the attention, most of the clinical and sanatorium advantages and privileges, while the former is avoided and is, as the author correctly says, *persona non grata*. To quote:

"The responsibility for the prevention of consumption rests directly with the medical profession in its advisory capacity on matters pertaining to public health. The physician, however, in the execution of so responsible a trust, should be mindful of his duties to consumptives as well as to society."

The reviewer cordially subscribes to Dr. Bonney's ideas as to the methods of procedure which the prophylactic and humanitarian efforts of society with reference to consumption should embrace. They are (p. 683):

1. Compulsory notification and registration of all cases of pulmonary tuberculosis.

2. A personally conducted supervision of the consumptive and his environment, including an elaborate system of education.

3. The extension of material aid, when necessary, according to the varying needs and requirements of differing classes.

4. The dissemination, to the general public, through the medium of various channels, of authentic official information regarding the prevention of consumption.

5. The administrative control of all important factors entering into the problem of etiology and prophylaxis.

Under the last caption we were impressed with the author's ideas on "tuberculosis and traffic" (Chapter XCII), in which he offers important suggestions concerning the supervision of sleeping cars serving for the transport of consumptives.

In a new book on pulmonary tuberculosis the practician usually turns first of all to the chapters on treatment, while the student of this malady looks up the discussion of moot questions which are still under discussion.

The sections on Treatment, which embody the results of Dr. Bonney's large personal experience, comprise the last fourteen chapters of this work, and, as is but natural, the greater space is devoted to the discussion of the general hygienic, dietetic and climatic means of managing patients ill with tuberculosis. In condemning the many ill-advised and poorly supported "cures" which are even today advanced for a "get-well-quick" result, as it were, the author says truly:

"While consumption is indeed curable, it is essential for the public to be informed that enduring success in this respect is not as beatifically simple as might be supposed from some of the current literature. It is desirable that the people should be thoroughly aroused from the lethargy and resignation prevailing in former years as to the fatality of consumption; but with the dawn of renewed hope, it is highly important for them to understand that the effort to regain health is fraught with no slight degree of individual responsibility, and that success may be attained only through wisely directed personal endeavor."

In accordance with this exceedingly important consideration, the author has given us an excellent, well-thought-out and well-tried guide for the management and treatment of tuberculous patients.

When discussing the question regarding open-air and climatic treatment, Dr. Bonney denies the justice of the assertion frequently made that any fresh and pure air, no matter where, is equally effective and that climatic influences are of entirely subordinate importance. He is very positive that climatic factors play an essential role and that the benefit derived from an outdoor life is enhanced in suitable climates.

It is not necessary here to discuss the advice given for the treatment of special conditions and symptoms. These must be studied in detail in order to be of advantage to the practician.

Concerning the specific or etiological treatment of tuberculosis, the author is not enthusiastic. In contrast to other tuberculosis physicians who, by means of active immunization, have been able to obtain more prompt and permanent results than was possible by general methods alone, he concludes, from his experiences with Koch's bacillus emulsion only, "that some benefit may be expected to attend the employment of such an agent in a fair proportion of cases otherwise adjudged incapable of improvement."

Unlike another textbook on tuberculosis which The Bookworm felt obliged to criticize severely, Bonney's book is excellently indexed; it is also profusely illustrated, and in general well gotten up—but, then, the books published by the Saunders Company are always beautiful in their mechanical execution.

This work by Bonney, on pulmonary tuberculosis, undoubtedly is one of the most complete and valuable textbooks for the general practician, and since the subject is of such far-reaching importance, the reviewer recommends its study cordially to our readers.

It is especially suited to the needs of the general practician.

H. J. ACHARD.

WALSH'S PHYSICIAN'S HANDY LEDGER AND CALL BOOK

An excellent combined set of physicians' account books is provided in Walsh's Physician's Call Book and Walsh's Physician's Handy Ledger. The first is much like the usual "visiting list"—a handsome, morocco-bound pocket-book, with flap, containing blank pages for recording calls and charges, and the dose table and other emergency information ordinarily supplied in such books. This is the day-book of the system. The Handy Ledger is 7 by 10 inches and is so arranged that the record of visits made in the call-book may be transferred to it by a stroke of the pen, thus reducing the work and trouble of keeping accounts "charged" to a minimum. One page in the ledger gives ample room for recording a patient's account for a year or more.

The price of the Call-Book is $1.50; of the Ledger, for 600 patients, $3.50 and for 1200 patients, $7.00. Address Ralph Walsh, M. D., 1807 H. St., Washington, D. C.

FRIEDENWALD AND RUHRAEH'S "DIET"

Diet in Health and Disease. By Julius Friedenwald, M. D., and John Ruhraeh, M. D. Third, thoroughly revised and enlarged edition. Philadelphia and London: W. B. Saunders Company. 1909. Price, cloth, $4.00.

Among the many textbooks on diet the one by Friedenwald and Ruhraeh occupies an acknowledged position, inasmuch as a third edition has become necessary in the short space of five years since its first publication. It offers in concise yet clear and attractive form all the important information concerning the theory and practice of dietetics. After a consideration of the various foodstuffs and their different modes of preservation and preparation, the chapter on Special Dietetics, if we may call it so, is introduced by the discussion of infant feeding, of diet for the aged, diet in pregnancy, etc: and this is followed by a description of the various diets adapted for diseases, both general and organic.

Interesting chapters are those on dietaries in public institutions, in hospitals and prisons, in the Army and Navy, those on recipes, and finally the Rapid Reference Diet-Lists.

The book is full of valuable and interesting information and deserves closer study than we have been able to give it. It is with regret that the reviewer has, among so many excellent things, found repeated (p. 187) the old fairy story that Koch had made the statement in 1901 that bovine tuberculosis could not be transmitted to man. It appears as though the many discussions on the subject, and especially the recent Washington Tuberculosis Congress, should have afforded an opportunity of consulting the original documents of the controversy, when it would have been ascertained that Koch was never guilty of making such a sweeping statement. However, this is a matter for special discussion, and does not interfere with the great value of the work in the matter of dietetics.

DOCK'S "HYGIENE" AND MORALITY

Hygiene and Morality. A manual for nurses and others, giving an outline of the medical, social and legal aspects of the venereal diseases. By Lavinia L. Dock, R. N. G. P. Putnam's Sons, New York and London. 8vo, 200 pp. 1910. Price $1.25 net.

This is a most important book, not only for nurses, but at least equally so for the "others", not excluding physicians. We would urge its careful study especially upon general practicians who lack the time to follow up the special literature upon the subject.

After a brief chapter describing the venereal diseases, the author considers in detail the question of prostitution and its regulation. She shows eloquently the difficulties and ill results of regulation of licensed prostitution, although her argument is singularly free from the so frequent hysterical outcries that license is wrong yet which do not offer a better remedy. The author describes fully the attempts made, especially abroad,

to regulate prostitution and thus diminish the frequency of venereal diseases, and supports her contention by figures that all regulation has so far failed of the objects. The terrible revelations of the last twenty years, concerning the white-slave traffic, are reproduced, and the deduction is drawn that this traffic is a necessary sequel of regulation.

The remedy proposed is far-reaching and complicated. The author fully realizes the difficulties barring all attempts at limiting the spread of venereal diseases and goes fairly to the bottom of the problem. This can, as a matter of course, be solved only by later generations, still it is incumbent upon us of today to lay the foundations for this important work, by the instruction, first, of grown-up and growing-up people, and then by educating our children from the very cradle.

It is not here the place to discuss this difficult and involved problem editorially. But we submit that it is the duty of every physician to inform himself as far as possible of its nature and of the attempts made to solve the same. It is our duty to take a definite stand in the question and to assist social workers and educators more than hitherto in being accorded a prominent position in teaching the people, adults and children, the truth concerning sex and venereal diseases.

THE PRACTITIONER'S CASE-BOOK

The Practitioner's Case-Book, for recording and preserving clinical histories. Prepared and arranged by The Editorial Staff of The Interstate Medical Journal, St. Louis, 1910. Price $2.00.

This quarto volume offers a simple and efficient means for the general practitioner of recording and preserving his clinical histories. There can no longer be any doubt about the necessity of keeping notes of all cases treated, not only as a matter of record for a more satisfactory attendance on a running case, but for future reference in the event of later disease; then as a record for possible legal complications, for the collection of dues, etc., and, finally, as a basis for clinical reports for publication. The physician who makes notes of the condition of his patients, at the time of consultation or by the bedside, soon acquires a reputation for careful work, while he does not have to rack his memory for the details of earlier treatment, nor need he ask his patient what medicine he has had—a question which always makes a bad impression and lays the physician open to the reproach of forgetfulness and lack of interest.

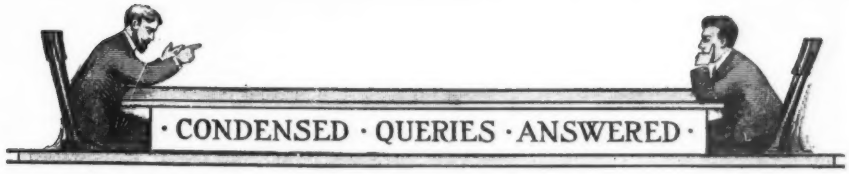
For physicians who like to preserve their case-records in book form this case-book will prove useful. The important data for history, symptoms, treatment, etc., are all well provided for. The specialist, of course, may want another set of questions, while many physicians may prefer the card index; personally, The Bookworm has always preferred blank cards (3 x 5 in.) for his records, putting down whatever appeared to him of interest and importance. But whatever the individual predilections, this Case-Book undoubtedly is excellent in its own field. The clinical charts are sufficiently varied for all needs and are perforated for easy removal, if desired.

VISITING LISTS

The Practitioner's Visiting List for 1911. Philadelphia, Lea and Febiger. In four styles; weekly dated, for thirty patients; monthly, and perpetual for thirty or sixty patients weekly. $1.25 net; with thumb index $1.50 net.

The Medical Record Visiting List for 1911 New York, William Wood and Company.

We take pleasure in announcing the editions for 1911 of these visiting-lists which have become a standard for this style of record. Both contain much valuable information to which the physician may want to refer hurriedly, such as dosages, incompatibles, weights and measures, treatment of poisoning and other emergencies, etc. The little books are substantially bound in red leather, with flaps and pockets, pencil and other conveniences. Our readers who have been in the habit of using visiting-lists wil do well to act on this reminder and supply themselves with the copy for the coming year. We trust that we may be excused from expressing a preference, since such could only be founded on personal predilections.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5618.—"A Short-lived Typhoid-Fever Attack." In my opinion there is a poor history to base a diagnosis of typhoid fever on in this case, and I was surprised to find that the editors of the journal agree with the diagnosis. Why did not the doctor make a Widal test and an Erhlich-diazo test? The doctor found her on the 26th with a pulse of 122 and in five days it was 80 and no fever. This in my opinion was a case of acute auto-intoxication. I have had such cases. I am a great believer in the sulphocarbolate treatment in typhoid fever, and while I have had better results under this treatment than any other, I will say that some typhoid cases die, and I cannot abort or cure them in a week. I am talking of typhoid-fever cases now. I believe the sooner doctors get down to business to diagnose cases properly, then and only then shall we be able to treat our cases intelligently. H. H. ROTH.

Murphysboro, Ill.

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[A business-like critique, which is appreciated. We agree with Dr. Roth on the importance of using the laboratory methods of diagnosis—and every other method which will contribute to accuracy. In the case criticised, however, the doctor should be reminded that the patient had been sick two weeks, possibly more, before the physician was called, so that no claim is made that it was aborted, though there is an abundance of clinical evidence that the disease may be aborted, if seen at its inception. This case undoubtedly ran the classical three weeks of cases of the mild type. The abdominal tenderness, gurgling in the iliac fossa, rose-colored spots, enlarged spleen, etc., tend to confirm the diagnosis. But it is true we should not stop with these.—ED.]

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ANSWER TO QUERY 5619.—Answering your query relative to "Insect Stings and Snake Bites" in the September number of CLINICAL MEDICINE, I desire to call attention to the action of antiformin.

The Imperial Department of Health of the German Empire and Prof. Klebs, first called attention to this fact which is borne out by my experience with the bites of the crotalus (rattlesnake) of Florida and Georgia. This preparation combines chemically with the venom, neutralizing it, has an antiphlogistic and anesthetic action, promptly alleviating the subjective symptoms.

An incision should be made and a 10-percent aqueous solution should then be applied. The other measures outlined in the September number are valuable as an adjunct treatment.

Scorpion stings should yield to this treatment as rapidly as snake bites and I would be glad to have the doctor try these means and report the results in the Journal.

J. M.

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[The composition of antiformin, a German proprietary preparation, is similar to that of the well-known Labarraque's solution. It contains about 7.5 percent of free sodium hydrate and 5.2 percent of bound chlorine. It is said to be a very active disinfectant, in a 2.5 percent solution destroying most bacteria within five minutes; tubercle bacilli, however, resist its action, this fact supplying a con-

venient method of differentiating this micro-organism from others. Antiformin is much used in the disinfection of drinking water, urinals, stools, etc.—ED.]

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ANSWER TO QUERY 5624.—I can beat you. The patient will not only be cured of the "fidgets" but the general health will be greatly improved by metallic zinc, five grains of the 6x trituration three times a day.

J. B. S. King.

Chicago, Ill.

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ANSWER TO QUERY 5627.—"Sodium Sulphocyanide." You say the drug is practically unused in medicine in this country. Some time within the last three years I have seen in *The New York and Philadelphia Medical Journal* at least two articles by different authors on the use of sodium sulphocyanide in arteriosclerosis and to reduce blood pressure in hypertension. One author gave the dose as 1-2 grain and one as 1-12 grain. Both claimed prompt and remarkable results from its use in the hypertension of Bright's disease, chronic uremia and arterioscerosis. I have never tried the drug, but cannot see how harm could result from the careful use of it.

G. A. GRAHAM.

Kansas City, Mo.

—

[Thank you, Doctor, very much for your interesting note on the use of the sodium sulphocyanide in this country. If by any chance you should at your convenience unearth the reference, which you cite from memory, we should feel ourselves under great obligation indeed, if you will supply us with it.—ED.]

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ANSWER TO QUERY 5630.—I was interested in reading the criticism of J. L. A. of the "enormous dose of codeine in the anodyne-for-infants granule." It may interest the doctor to know that I have frequently given twenty of these in an hour, to a six months' old child, and not infrequently as many as thirty to a child under one year, where it was indicated. Children who take them for a time soon become very tolerant and the dose must be increased to get results. One infant of six months took for a week 1-12 grain codeine with 1-250-grain hyoscyamine every three hours. Dosage cannot be worked out on a sheet of paper. Best place to work it out is on the patient under treatment. I have a girl eight years old under treatment for post-diphtheritic paralysis, who for three weeks took 1-6 grain of strychnine arsenate daily. She is at present taking 1-30 grain every four hours with lecithin and nuclein, and with splendid results. She wouldn't be so far advanced if her dose had been figured out instead of worked up.

A. R. G.

New York, N. Y.

QUERIES

QUERY 5646.—"Is He a Cretin?" S. Nebraska, has in his charge a boy 9 years old who since his second year has been "wrong;" development is that of a six-year-old, yet his contour good. The lower jaw drops, and he "drools" constantly. He has had no control of bowels and bladder. When small, enemas were used every day. Mentally the boy is not as he should be. Thinking him a cretin the doctor placed him on thyroid last fall, 1 1-2 grains thrice daily; the pulse slowed to 100 and has stayed at that point, while the thyroid was increased to 4 1-2 grains three times a day. For two weeks in winter he controlled bowels. Bladder he now controls all the time.

Test the reflexes and send a specimen of urine and blood-smear to the laboratory. What is the family history? Was there any injury at birth, any luetic taint in parents, or noticeable thyroidal abnormality?

If this child is a cretin (which seems probable) we would suggest that he be given a salt sponge-bath daily and kept in the open air as much as possible. Fresh thyroids may be chopped up and given in sandwiches or *au naturel* with a little salt. Nuclein should be pushed for one month in ten-drop doses, morning and night, and arsenic iodide and iron iodide given one hour after meals, day and day about, for a like period. At the end of a month exhibit thyroid extract or iodothyrin, t. i. d., and calx iodata,

phytolaccin and rumicin, morning, noon and night for another month. Flush the intestine every third day; dilate the sphincter ani; circumcise; and if lime salts are markedly lacking, give calcium lactophosphate, four times daily for ten days, resting ten days and repeating. We cannot lay enough stress on the necessity for *alternation* of these remedies.

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QUERY 5647.—"Chronic Bronchitis? Hepatic Abscess." T. A. M., Indiana, desires treatment for a child ten months old who has had "a very deep cold since last August, and has been treated by different doctors from the beginning." Patient is now on calx iodata, 1-2 grain every three hours, with calomel, 1-10 grain, four times daily.

Another case is that of a boy seven years old, who has had abscess of the liver for about three months. This patient also has been treated by other physicians until recently. The abscess is "about the size of a goose egg," and firm.

The doctor also desires to know how much calx iodata should be given a child one year old—how often and how long?

We cannot possibly prescribe intelligently for the first patient without a much clearer idea of clinical conditions. Examine the child and give us some idea of pulmonary and heart sounds, pulse-rate, temperature—in fact, a concise but full clinical picture. A specimen of sputum secured after coughing should be sent to our laboratory. It might be well to accompany this with a specimen of urine.

If the abscess is at all extensive it should be drained. Stools and urine should be examined and a blood-smear made. In the meantime give nuclein in rather large doses hypodermically, or let it be absorbed from the buccal mucosa, at the same time administering echinacea, iridin and calcium sulphide four times daily, with juglandin before and chionanthin after food. We certainly should open and drain that abscess if it exists, but if you can detect a firm nodule the size of a goose egg you most likely have a neoplasm of some kind and not an abscess to deal with.

The dosage of calx iodata for a child one year old varies according to conditions. In croup a child may receive 1-3 grain every fifteen minutes; in ordinary bronchial disorders 1-3 grain three times daily would be full dosage, one-half that quantity (in solution) sufficing in most cases. Do not give calomel four times a day, Doctor, but exhibit small doses at hourly intervals till one grain is taken. Then flush the intestinal tract with a laxative saline.

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QUERY 5648.—"Syphilitic Warts." J. E. W., Nevada, is treating a man, age 50 (a bookkeeper, and very bald), who denies specific infection. Four years ago he noticed a hard spot growing on one of his fingers, but paid no attention to it until about six months ago, when other places began to develop. The skin becomes calloused and cracks appear in areas about the size of a 10-cent piece. The removal of a piece usually leaves behind a very sore spot, until it heals over. He has about fifteen of these in all on the fingers of his two hands and one is beginning on the palm of the left hand. He admitted a "non-specific sore."

At present the patient is receiving about 7 1-2 grains of potassium iodide a day and a carbolic ointment for local use. This man has had more or less "stomach trouble" (as he puts it) for years, but never any treatment. He weighs 200 pounds; he has a soft skin.

We are inclined to think (though the data are insufficient to undertake a *real* diagnosis) that you have to deal with a specific condition, i. e., syphilitic warts. Anyhow, we should put him on mercury biniodide and calx iodata, adding iridin in rather full doses. Touch the nodules with specific thuja, and once a week apply cotton, saturated with potassium-iodide solution, and drive it in by cataphoresis. Keep the intestinal tract thoroughly clean, and once or twice a week have the patient sponge his entire body with carbolated epsom-salt solution (epsom salt, one ounce; water 1-2 gallon; carbolic acid, 20 minims). If the patient is able, and can spare the time, it would be well for him to go to Chicago, or some other large city, and have a Wassermann test made. You would then know definitely what you have to deal with.

QUERY 5649.—"Vertigo Following Typhoid." E. D. J., Oklahoma, is treating a girl 18 years of age who has been troubled with "dizzy spells" for six years. They last about thirty minutes and have occurred since she had typhoid fever six years ago. The doctor asks what we should recommend.

If you will give us a clear idea of clinical conditions and send a specimen of the girl's urine we shall be able to make some intelligent suggestions. The positive therapeutist diagnoses closely and gives the right remedy for the condition present in small repeated doses to effect—remedial or physiological. This is the reason for his success.

Pay particular attention to the spine, see if there are any areas of anesthesia or hyperesthesia; note condition of tongue; test the reflexes, especially ocular and patellar. Is there any tenderness over the cecum, constipation or loss of weight? How often do the attacks appear, or do they occur regularly? Describe any known exciting cause such as fulness of stomach, amenorrhea, etc.? Note the heart-sounds and give pulse-rate. The patient is probably anemic and autotoxemic.

—

QUERY 5650.—"Sunstroke. Pott's Disease." M. H. B., South Dakota, has recently had to care for three cases of sunstroke, none of them very serious. They received salines, intestinal antiseptics and strychnine. They now [presumably some time after recovery—ED.] complain of dizziness, faintness and weakness and cannot endure the sun. Two of the patients have weak and irregular pulse. Treatment is desired.

The doctor also has a case of Pott's disease of the spine. Brace is to be applied. The child is four years old and a quarter-blood Indian. It is fairly well nourished. The deformity is the size of a man's fist, involving upper half of dorsal vertebræ. Patient walks on all fours or lies on face on pillows. What is the best *medical* treatment?

The three cases of "sunstroke" would hardly require medicinal treatment by the time this reaches you. In all such cases for several days there is more or less intolerance of heat, but this gradually passes away. Of late physicians have been securing remarkable results in cases of sunstroke from the use of hyoscine, morphine and cactin in proper proportions.

Of course, Doctor, you know as well as we do that there is a vast difference between "sunstroke" and heat prostration, and the treatment, after the urgent symptoms are controlled, must in every case be symptomatic.

There are three varieties of heat-stroke: (1) The asphyxial, in which death may be instantaneous, but recovery, if it takes place, is usually complete. Symptoms are cardiac and respiratory failure, slow breathing, gasping, coolness of the skin, insensibility. These symptoms present after exposure of head and back of neck to the rays of the sun. (2) The hyperpyrexial form. This variety may result from exposure to any heat and come on after such exposure has existed, or even at night. Some premonitory symptoms are usually noted, such as vertigo, nausea, insomnia, high fever, diarrhea or frequent micturition. Insensibility comes on gradually, patient breathing stertorously. There is restlessness, the face is suffused with blood or cyanotic; pulse quick, temperature high (106° to 108° F.). Early the pupils are contracted, later dilated. Recovery from this form is seldom complete, the patient being unable for some time, or ever afterwards, to endure exposure to excessive heat in any form. Loss of memory, pain in the head, paralysis, localized tremor, and even insanity may result. (3) The syncopal form, or heat exhaustion. Here we have merely intense prostration, cool, moist skin, and lowering of the body temperature. Recovery is generally complete and uneventful.

For congestion of the head glonoin, followed by veratrine, with saline purgation, is usually given; cold epsom-salt sponge-baths, hyoscine, morphine and cactin hypodermically; cold pack. For the after-effects, small doses of atropine valerianate with caffeine. Patients with a weak and irregular pulse call for cactin and nuclein, with minute doses, perhaps, of strychnine arsenate. Keep the patient cool, his skin active and the bowels open.

There is little "medicinal treatment" for Pott's disease. It may be of either tubercular or syphilitic origin. You do not state whether the sphincters are involved or the reflexes affected. We cannot, therefore, see how far caries has advanced or whether an abscess coexists. Does the patient complain of severe pain? Is there any palsy or numbness of extremities? Give us a clear clinical picture and we may be able to help you.

In the meantime, Doctor, study some of the recent works on diseases of the nervous system, especially the chapters on compression myelitis. Search carefully for tuberculous or venereal taint. Rest and support to the spine instituted early may prevent paraplegia. When paralysis exists, rest with extension are the most effective remedial agents. Some cases have been cured by enforced recumbency maintained for weeks and months. Hyperextension during recumbency is advocated by many. Fresh air is essential. The child should receive good nutritious food and, if tuberculous, nuclein with the arsenates of iron, quinine and strychnine, or the nucleinated phosphates with calx iodata. If there is a luetic taint specific treatment should be instituted promptly. We would be inclined under the circumstances to push nucleinated phosphates with calx iodata. Bovine blood (defibrinated) with each meal might also prove beneficial.

—

QUERY 5651.—"Medication in Hodgkin's Disease." I. N. M., Tennessee, desires to know if any treatment, with or without arsenic, is of real value in Hodgkin's disease? He has a patient, male, aged fifty, family history good, occupation farmer who has been failing in strength for eighteen months. No marked loss of flesh. Twenty days ago the cervical lymphatic glands on one side and one inguinal gland began to enlarge. Temperature of 100° to 102° F. All the cervical and inguinal glands are now enlarged together with liver and spleen. Patient is confined to bed with a pulse of 108, and there is great prostration and dyspnea on moving the body. The urine is loaded with phosphates and albumin. The glands in the neck are much larger, hard as a bone and fast to the skin. The doctor realizes that he may have to deal with a lymphosarcoma but makes a diagnosis of Hodgkin's disease. He is now giving arsenic to toleration.

You are, of course, familiar with the fact that in pseudoleukemia (Hodgkin's disease) the enlarged glands are more frequently soft than hard, and as a rule, the skin above the glands can easily be raised. The swellings are painless, but pressure symptoms may appear comparatively early; the internal lymph glands become enlarged before those in the cervical region. When the thoracic glands are enlarged the patient suffers from respiratory disturbances caused by direct pressure upon the larynx, trachea, bronchi or the recurrent laryngeal nerve, or to the decreased erythrocytes which are the necessary oxygen carriers in the function of respiration. More or less difficulty in deglutition results from pressure upon the pharynx or esophagus. This symptom is, however, rarely observed.

The extreme hardness of the glands in your case and the rapidity with which this symptom developed makes the diagnosis a little questionable. Of course the internal glandular enlargements may have been present for some time before the cervical glands and other superficial chains become involved.

The urine in Hodgkin's disease shows nothing unusual provided no complications are present. Uric acid is usually present in large quantities, however, such excess being due to the increased destruction of the leukocytes. You do not mention hemorrhages, nasal or subdermal. In nearly all cases of Hodgkin's disease petechiae or larger effusions of blood will be observed.

Your patient is probably tuberculous. We now know that in most cases of so-called pseudoleukemia presenting the typical picture, tuberculosis of the glands exists. In still other cases a postmortem reveals sarcomatous changes — lymphosarcomatosis. Virchow describes a hard form of lymphosarcoma and we are inclined to think that your patient presents this type of the disease.

Very little can be done for him, or in fact for any patient over forty. You should send a sample of this man's blood to the laboratory and have a blood-count. This will clear up

the diagnosis in short order. We should be inclined to give arsenic iodide, gr. 1-67 to 2-67, after each meal; iridin, gr. 1-3, phytolaccin, gr. 1-3, stillingin, gr. 1-3, an hour before food. The arsenic iodide may be alternated with arsenous acid week and week about, or you may use sodium cacodylate. The dose for adults is 0.025 to 0.1 Gm.

If you desire a more pronounced impression arsenic may be injected subcutaneously or directly into the glandular substance. A 10-percent solution of sodium cacodylate in sterilized water is used for a week, one-half of a hypodermic syringe-full being injected. Stop injections for a few days, then resume until, after a few days' intermission, the dose is increased to an entire syringe-full. Inunctions of sapo kalinus (fluid potassium soap) may be advantageously employed. A teaspoonful or more should be rubbed in daily with a pledget of cotton. When redness and burning of the skin appear rubbing is stopped and is not resumed until the symptoms disappear. Iodoform may advantageously be added to the soap or a saturated solution of iodine in glycerin applied after the rubbing

If you have a wall-plate a solution of potassium iodide may be driven in by cataphoresis. We need hardly point out that the patient should be fed upon the most nutritious, easily assimilated foods and elimination, dermal, intestinal and renal, must be maintained. Perhaps the x-ray treatment promises more than any other curative method known to the profession at the present time.

—

QUERY 5652.—"Bismuth as a Teniacide." M. C. H. B., South Dakota, reports the case of a child three and one-half years old (female) who had tapeworm two years. Was delicate when weaned; liked and thrived on raw beef and was given plenty of it until she began to pass segments of the worm. Three unsuccessful efforts were made to expel the parasite, the child vomiting the medicine, though every precaution was taken. After the last attempt, the child's stomach being upset, pepsin, hydrochloric acid and bismuth subnitrate were given and in two weeks the worm was passed, colored deeply by the bismuth, as were the feces. It was a beef tapeworm. What part did the bismuth play in expelling the worm?

Boy, age 12 years. At six months had prolapsus of rectum. At nine years (with no treatment but constant care) case had improved until a very slight prolapsus remained. It was thought best to cure the boy, so he was operated upon by an army surgeon with the actual cautery. In two months he was not able to sit up. There was constant vomiting; stricture of rectum, nothing could pass bowel. Was operated upon by an Omaha surgeon. It was quite a severe procedure. At present time (three years after last operation) a stricutre seems to be forming. It was beginning five months ago when a soft rubber bougie two inches in circumference was first used. This caused some pain at first. Now this causes no discomfort but one 2 5-8 inches in circumference causes some pain and the stricture can be easily felt about 1 1-2 inches from anus. Will anything cause absorption of this stricture?

Tenia, as you know, are sometimes voided after the exhibition of a few doses of calomel, rhubarb, magnesia, or castor oil, even. In this case the worm had probably been affected by the teniacide previously given and the bismuth subnitrate completed his discomfiture. That the drug affected the parasite profoundly is evidenced by the fact that it was discolored. As you know, bismuth forms a coating over the intestinal mucosa and this deposit would prove, we think, very objectionable to the worm. We have heard of tapeworms being voided by patients receiving bismuth for other disorders. Some experiments in this direction might prove instructive.

In the case of stricture we should be inclined to give thiosinamin a trial. A sterile glycero-aqueous solution will prove the most available form, each ounce containing 75 grains of the drug. Five to ten drops may be given in a little weak alcoholic vehicle. If the little fellow can stand a few semi-weekly hypodermic injections of ten minims so much the better. We would also suggest the use of a suppository containing pepsin, papayotin and pancreatin. These should be incorporated in a vasogen and glycerin paste. The galvanic current might be used to obtain, cataphoretically, the action of thiosinamin.

The American Journal of Clinical Medicine

DEPENDABLE THERAPEUTIC FACT FOR DAILY USE

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Our Christmas Greeting

DECEMBER again! Another year is almost finished—a good year for "Clinical Medicine." Through it all there has been a steady accretion of new subscribers, new advertisers and new friends, and the old friends, God bless them! have stood by us "through thick and thin," striving, even as we strive, to help make this journal a better journal and its work for the doctor more effective.

Team Work has made "Clinical Medicine" what it is.

Men and women do their best work only when they love their work, and when there is a genuine tie of interest and sympathy among those who toil. The most perfect organization will fall far short of its highest possibilities if it insists upon efficiency but forgets the wonderful success-contributing power of the human heart.

Today we turn our faces backward—but only today; tomorrow we look forward again, and more eagerly, more hopefully than ever. What we have accomplished in the past we owe in large degree to you, dear friends; and the future lies in your hands.

A MERRY CHRISTMAS AND A HAPPY NEW YEAR!

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DEVOTED TO ACCURACY, DEPENDABILITY AND HONESTY IN EVERY DEPARTMENT OF MEDICINE AND TO THE SAFEGUARDING OF THE DOCTOR

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EDITORIAL DEPARTMENT

LEADING ARTICLES

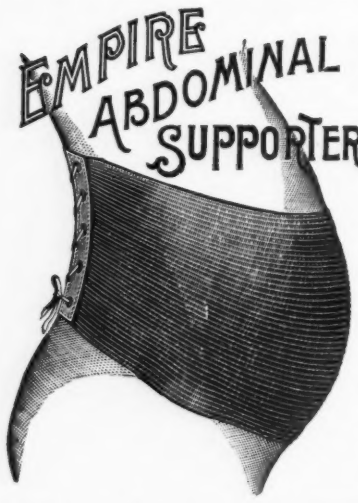
THERAPEUTIC NOTES

FOREIGN GLEANINGS

MISCELLANEOUS

SPECIAL LEADERS FOR NEXT MONTH

The Story of the Surgeons' Congress. E. LANPHEAR
A Journey to the Home of Benjamin Smith Barton. G. F. BUTLER
Ehrlich: The Man and His Work. B. C. CORBUS
At the Military Encampment. C. S. MOODY
Specific Treatment for Tuberculosis. W. C. GOODWIN
Treatment of Tuberculosis. W. F. WAUGH
Varicocele. B. H. BREAKSTONE
Organization for Financial Betterment. C. E. SAYERS
Tobacco and Diabetes. A. A. HOEHLING, U. S. N.
Dislocations of the Hand. R. ST. J. PERRY
Acute Anterior Poliomyelitis. TOM A. WILLIAMS
Scopolamine or Hyoscine. E. ROBERT-TISSOT



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8	inches	wide		$2.50
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We invite the attention of the medical and surgical profession to the various merits combined in our bandages.

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2nd. **Its Elasticity,** which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, a feature unknown to any other bandage.

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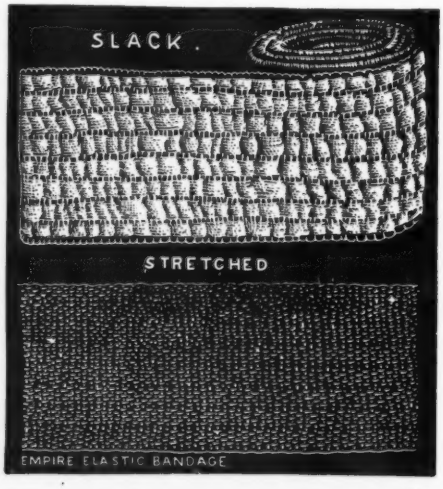

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dissolve promptly and thoroughly. **Test one by the watch.** Drop the tablet into a syringe half filled with lukewarm water. Shake vigorously. In five seconds (or less) it will have dissolved completely.

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Each fluidounce contains:

Tincture Euphorbia Pilulifera, 120 minims.
Syrup Wild Lettuce, 120 minims.
Tincture Cocillana, 40 minims.
Syrup Squill Compound, 24 minims.
Cascarin (P. D. & Co.), 8 grains.
Heroin hydrochloride, 8-24 grain.
Menthol, 8-100 grain.

DOSE: ½ TO 1 FLUIDRACHM.

Syrup Cocillana Compound

is quite unlike the average cough syrup, as a perusal of the formula will show. It is efficient therapeutically. It is pleasing to the taste. It is inviting in appearance. It is free from the constipating tendency of many otherwise good cough syrups.

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Publisher's Department

BUILDING GOOD WILL

Out in one of the suburbs of Chicago a man started a drugstore not many years ago.

His capital was by no means unlimited.

And he was up against pretty stiff and active competition.

At the very beginning it is very likely that young Dr. Pharmacist sat down on a Horlick's Malted Milk packing box and held commune with himself.

And, peradventure, his soliloquy ran in this wise:

"Here I am, a newcomer, confronted with stern necessity of making good—and that quickly. I must contend with established and live competition. What shall I do to uphold my name among the '*izzers*,' and keep my credit un-pushed-in?

"I shall trace with nitric acid on my heart these words: 'Courtesy conquereth all things.'"

Which latter sounds scriptural—but isn't.

Maybe the druggist said nothing of the kind. Maybe he was of natural-born courteous instincts. But, anyhow, he *practised* courtesy.

Not sloppy, fawning, overdone courtesy, you understand—but just the right thing at the right time in the right way—and always seeming to do a little bit *more* than was expected.

Which is going some for a druggist.

Of course, druggists *are* martyrs. We must admit that.

If there is any one member of the community upon whom all feel at liberty to pounce and prey with the most outlandishly unreasonable requests it is the man at the sign of the mortar and pestle.

It is fully within the possibilities for a mother to request the unfortunate R. P. to mind a wailing infant while she looks after matters more important. And it would scarcely surprise the suburban druggist to receive a request for the gratuitous services of his assistant to mow the lawn of one of his most regular postage-stamp customers.

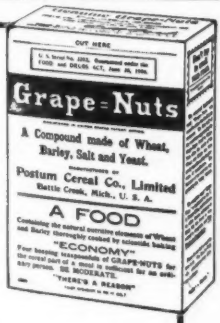
Speaking of postage-stamp trade, it was there that young Doctor Green—it is time we gave him some sort of name—fairly outshone all competition.

He could hand out a two-cent stamp and break a ten-dollar bill to make change for it, with a smile of heavenly joy that was simply beautiful to behold.

He would run seven blocks in his shirt sleeves to summon Mrs. Crabtree to the telephone, and then apologize to her humbly for not telling her in advance that the call was from that lady's sister-in-law—one whom she "would never walk that far to talk to—any time."

Time after time—and this is a truthful tale—in the absence of his own assistant, he would bribe a small boy on a bicycle with a dime to deliver a postage stamp that had been ordered by phone from a remote part of town.

Every church, lodge, club and society visited him and he responded to their solicitations for financial aid with a cordial "*yes*," and an automatic dig into the pocket that fairly took one's breath away.



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play a most important part in the nutrition of the human body—in the physiological activities of the cells.

This is especially so in the requirements of those "highly specialized" tissues—brain and nerves.

The "inorganic" phosphates and hypophosphites of the chemical laboratory are not the same in "food value," as those formed in Natures "organic" laboratory out in the sun-kissed fields of wheat and barley.

Grape-Nuts

made of whole wheat and barley, contains not only the protein and carbohydrates of these cereals, but also the "grain phosphates" so necessary to the perfect cell-elaboration and tissue metabolism.

The "Clinical Record" for physician's bedside use, with name stamped in gold letters on cover, will be sent to any physician who has not already received a copy. Also prepaid sample box of Postum and Grape-Nuts for clinical experiments.

Postum Cereal Company, Limited, Battle Creek, Michigan, U. S. A.

For—mark you this—he not only did the thing asked of him—but did it *instantly*—as though he were genuinely glad to do it.

Did it win? Of course—it won.

Some abused his courtesy, his generosity, his good-fellowship.

But more appreciated them.

He now has a trade that nets him a handsome yearly income. He has added other stores and is prospering in all of them. His customers he has grappled to him with hoops of steel.

His business is built. His trade is established.

But the strongest point of the whole story is this: That the ten-cent boy on the bike still carries the profitless two-cent stamp to the farthermost parts of the town.

And the druggist whistles blithely as he sends him.

A RESTFUL ABDOMINAL BINDER

There is one very important thing that can be said about the Storm "Abdominal Binder" that will commend it at once to every physician, and that is, it never makes a patient nervous. On the contrary it is common to have patients declare how rested and relieved they feel from wearing "Storm" Binders, even though they are not conscious that they are on. So many abdominal binders, appendicitis belts, etc., keep patients constantly fretted by the sense of "being harnessed and saddled," as one bright woman described it, that it is a pleasure to recommend the "Storm" Binder with its absolute avoidance of unpleasant or "harness-like" effect. The Storm Binder is the last word in abdominal supports and the medical profession have been quick to note its superior advantages.—*American Medicine.*

THE APOTHEOSIS OF THE CIGARETTE

Fair-minded critics who have watched the modern evolution of medicine have often remarked how very tolerant is this special science toward many things which were tabooed, if not insultingly treated, some decades ago. Alchemy, for instance, was long in the medical Index Expurgatorius and the name of Paracelsus was execrated with the choicest imprecations. Yet no sooner had Mme. Curie discovered radium than considerable thought was given to the banished science, and though the name of Paracelsus is not even now mentioned with reverence, the principles for which he stood are not treated with the accustomed scorn. And what more illuminating than the derided doctrines of Christian science! Quite recently the *British Medical Journal* issued a number that had many articles written by able men on spiritual or faith healing. While the terms "monstrous" and "outrageous" were hurled at Mrs. Eddy's octogenarian head, there was yet to remark that between the lines of the several articles were undoubted indications of a *rapprochement;* and, whether the writer was Sir Clifford Allbutt, Sir Henry Morris, Mr. H. T. Butlin, or Professor Osler, he half-confessed to an inherent love for healing by faith. Lastly the cigarette, which used to be classed with "these mundungo's, and a breath that smells like standing pools in subterranean cells," is undergoing considerable rehabilitation at the hands of a well-known French physician, who proclaims its invincible virtues as an antidote against the parasite which causes cerebrospinal fever. Having made a study of the habits of forty-three cases in a certain French regiment, he arrived at the following conclusions:

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PNEUMO-PHTHYSINE is a preparation composed of Formalin, Guaiacol, Creosote and Quinine, with Aromatic Antiseptic Oils in an Aluminum Silicate Base. It combines the efficiency of the Glycerine Aluminum Silicate paste as a local depletory agent, combined with the various activities of the other agents which act by osmosis.

The idea involved in the development of Pneumo-Phthysine was not only to relieve local inflammation or congestion, but to overcome as much as possible the administration of its active elements by the stomach. This, the Endermic method, has been used from the earliest times, but our improvement is far superior to the old method of merely painting the skin or applying a saturated cloth. The active agents Pneumo-Phthysine contains reach the circulation.

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Institute Place **CHICAGO, ILLINOIS**

25.2 percent were smokers, 30.2 percent occasional smokers, and 44 percent non-smokers. While these conclusions may be objected to on the ground that the high principles of science played no part in them (although by this time the French doctor may have proved how deadly is cigarette smoke to the life of the meningococcus *in vitro*), the novelty of the statement, relieving as it does the heretofore despised pariah from all odium as an unmitigated nuisance, is another indication that the science of medicine is getting more and more tolerant as the years speed by. One point, however, should not be overlooked by the patient reader of these lines, and that is that the smoke which proved so excellent a prophylactic did not emanate from cigars but from many cigarettes; in fact, the greater the number which had been smoked, the better the immunity.

Prejudices die hard, and mindful of this time-worn axiom we fear that many years will have to elapse before American physicians will regard the cigarette in the favorable light in which it is held by our French confrère. For some reason, which has never been fully explained, the sight of a cigarette in the mouth of an otherwise inoffensive citizen is enough to make the gorge of the average American physician rise in righteous anger, though he may be amiability itself under the onslaughts of the most offensive cigar. Perhaps those specimens of insiduous journalism with which all our newsstands are cluttered—the ten-cent dreadfuls—have done more to color the average physician's opinions than anything else; and though we have no mean opinion of the average physician's reading proclivities, his prejudices in regard to the cigarette surely can be traced to this source, since no medical journal of any standing prints today articles that fulminate against the smoking of cigarettes with its attendant evil, "tobacco heart." But now that the cigarette has really come into its own as a prophylactic in cerebrospinal fever, even these much-ridiculed literary ephemera of a passing hour may see fit to write lengthy scientific disquisitions on the cigarette in the treatment of disease, and when this is done we have no doubt that much will be accomplished in lessening those prejudices which are so firmly planted in the mind of the average medical man.

CALCIUM CREOSOTE

I have been for some time intending to have a little say about Calcium Creosote. I obtained a sample pint somewhere about June or July, 1909; did not have occasion to employ it until September 25, 1909.

A lady living six miles from town sent for me to see her for a very bad cough. I found her in a very deplorable condition, so much so I did not believe she could live a month. Two brothers had died two and three years previously of pulmonary tuberculosis. The stereotyped medication in such cases appeared so utterly useless I did not attempt it. I did, however, give calomel 1 grain, and sodium bicarbonate 3 grains, mixed and triturated together and divided into 8 parts, giving one part dry on tongue every fifteen minutes. I gave her 4 ounces Calcium Creosote, with instructions to take two teaspoonfuls in a glass of water every three hours, instructing her to send for the other part of the bottle should the amount I left appear to benefit her. In about a week, to my great astonishment, she came into my office to get the rest of that bottle, declaring she never had anything

The Physician and the Corsetiere

Fashion and Medical Science Go Together

NOTE—From address delivered by an eminent surgeon before the North American Congress of Clinical Surgery

"A properly constructed corset gives the woman wearing it the most artistic figure possible for her to have. In most cases of semi-invalidism a rightly made corset will lift its wearer to health and develop her figure to lines of beauty."

An eminent surgeon at the Post-Graduate hospital clinic yesterday said doctors should be the ones to design corsets. He said that corsets always will be worn, but that they need only be made properly to produce a race of classically beautiful women. He commended the current "straight front" fashion.

Rigid Back, Lace in Front

These are his rules for hygienic corseting:

The back of the corset must be molded rigidly.

The corset must lace up in front.

The front lacing should be planned for flexibility and ready adjustment to the wearer's figure.

Measurements for the corset should be made by a physician.

This Doctor said the fashionable straight front and easy, well made waist would produce healthy bodies.

"A corset is a splint," said he. "You would not advise a patient to go to an instrument shop and pick out his own splint for a deformed limb.

"As the corset is a splint, if the figure it is placed on is the proper shape to begin with, the corset should not change the outline, but sustain it.

Advice to Thin and Fat

A stout woman should have a corset that will distribute her flesh, reduce her hips, flatten her abdomen, and support her. A slight woman should have a corset that will mold her figure to artistic lines and that will prevent displacement of the stomach. Her figure will become rounded by a proper gain in flesh if the digestive organs are not hampered by an improper corset and if a proper diet is selected for her.

"The harmful corset is the one that disproportionately narrows the waist and fails to support the body. Such a corset will occasion serious digestive symptoms, and, if persisted in, will produce appendicitis, serious diseases of the stomach, and finally semi-invalidism.

"On the other hand, a scientifically fitted corset is a boon to many women; without it they would never become strong, but with it they receive the necessary assistance that enables them to be transformed from unhappy apparitions and hypochondriacs without ambition to healthy women."

Text of Intestinal Disease Paper

This lecture on corsets as an impromptu dissertation in the course of a surgical clinic. The subject was intestinal diseases.

"Civilized women always have worn corsets," he said, "and they always will. The subject is a most important one to the general practitioner. The present fashion is encouraging. The straight front, which depresses the abdomen, and the upright lines of the waist are good. The points to be remembered are that a physician should order the corset, and that the adjustment should be in front and not behind. The body is solid and bony behind. That is where the rigidity should be. The front of the corset should be so adaptable that it can be laced up any day the way it feels comfortable."

The above address was made before the most representative Medical Congress ever held in the United States, and the testimony is from the lips of an eminent surgeon. We reproduce it because the **Gossard Corset** is THE ONLY corset IN THE WORLD which meets the demands explained by this Eminent Surgeon.

We were *the* ORIGINATORS of the Front-Lace Corset. *Ours* is the *Standard* from which all other designs have been taken, and we are still at the head of the corset field.

Our Designing Committees are at work all the time. That is why we make today the most perfect corset in the world.

Doctors:—If you will write us to know how and where you can get our corset we will send you the name of our local agent. *Send for booklet, and we are pleased to send upon request an article entitled "Corsets from a surgical standpoint" by Dr. Fisk Wood.*

The H. W. GOSSARD COMPANY

Steinway Hall. CHICAGO. ILL.

help her so much in her life. She has taken seven or eight bottles since, comes to town when she pleases, and seems to be entirely cured. The case appeared to be one of the most hopeless I have ever seen and her recovery is little short of a miracle and without doubt due to the use of Calcium Creosote.

Another lady in the city had severe cough, tonsillitis, bronchitis, great difficulty in swallowing, gastric disturbances, constipation, etc. Trophonin, 5 drops on tongue every ten minutes for six doses, quieted the stomach, when I gave one teaspoonful Calcium Creosote in half a glass of water every three hours; some disturbance at first but did not persist. In a few days she could take three teaspoonfuls in a full glass of water. This patient had every indication of a pretubercular condition. In three weeks every symptom disappeared, though she still takes Calcium Creosote occasionally as a prophylactic.

I have dispensed in the last year over half a hundred bottles of Calcium Creosote in not less than twenty cases of various and varying conditions and with benefit to all. My experience with Calcium Creosote has been more uniformly satisfactory in cases requiring respiratory stimulus and antiseptics than any medicament I have ever employed. I cannot account satisfactorily, even to myself, for its highly beneficial effects, but that it is eminently antiseptic and reconstructive to enfeebled mucous surfaces I am fully convinced.

As a remedy for coughs of almost every variety I find it much more satisfactory than mixtures containing opium in any of its many and various forms.

I have about decided that when called to a case of any kind that the thing to do is to "process" the case with creosote in the form of Cacium Creosote and go on my way with rejoicing, believing it to be more nearly a "King's Cure-all" than anything known.

Erin, Tenn. R. H. BAYLOR, M. D.

APPRECIATED COMMENDATION

Be assured, Dr. Abbott, that I am a life-long friend to the two principles you are advocating as embodied in the word I like, "alkalometry." I wandered in darkness 22 years, getting into the light of your work 17 years ago (which figures 39 years in the practice of medicine) and none can be more grateful than I am for the enlightenment. This is no flattery. It is just honest confession on my part—confession good for the soul.

O. C. SCARBOROUGH, M. D.

DR. ELLINGWOOD'S THERAPEUTIC JOURNAL

On a number of occasions the Editors of THE AMERICAN JOURNAL OF CLINICAL MEDICINE have taken pleasure in calling the attention of the readers to one of the most exclusive and exact therapeutic journals published in the United States, *Ellingwood's Therapeutist.* Our reasons for doing this is, that that journal is a journal with a mission. It is indeed unique. Therapeutics has long been neglected. With most of our exchanges in this line the subject is treated in a general manner, but this journal is explicit, precisely exact, and probably more specific, in presenting the exact action of single drugs, upon exact conditions of disease, than any other journal claims to be.

Dr. Ellingwood has made a thirty-five years' study of the action of drugs, and that would be a difficult thing to say, probably, of any other single man in the field. He has closely observed the conditions upon which the drug acts, the direct action of the drug, its undesirable influences, and has formed an opinion as to where it should be placed, and he invariably states that opinion definitely and concisely.

Each issue of the journal is full to the covers, with straight facts, drug action which has been proven, often by the editor himself, but always by close observers. Furthermore, the editor reserves the right to comment on all statements that are made, concerning drug action. These comments are exceedingly valuable, as they bring out the true action of the drug, or cautions as to undue influences and

Pabst Extract American Girl Calendar for 1911

Picturing a typical American Girl in all the natural freshness and beauty of vigorous youth, the Pabst Extract Calendar for 1911 is without question the most exquisite portrayal of an ideal we have ever seen—it is simply fascinating in its artistic beauty and subtle charm.

In panel shape, 7 inches in width and 36 inches in length, it lends itself perfectly to the filling of those corners that are so hard to decorate—and, being printed in 12 delicately blended colors and gold, it harmonizes pleasantly with the color scheme of any room.

You Surely Want One for Your Home, Den or Office

It is absolutely free of all advertising on the front—even the calendar pads being printed on the back. We have tried to make this beautiful panel a suitable decoration for any home, hoping that it will act as an occasional reminder to those receiving a copy that

Pabst Extract
The Best Tonic

"brings the roses to the cheeks"—that it is a perfect blending of richest malt and choicest hops into a natural reconstructive agent and builder of health, strength, vigor and vitality—a malt tonic that enriches the blood and tones up the entire system.

The United States Government specifically classifies Pabst Extract as an article of medicine--not an alcoholic beverage.

For Sale at All Druggists—Write It "Pabst" in the Prescription

This Calendar is Free to Physicians

Simply write us on your professional letter head and one of these beautiful calendars will at once be sent you without charge.

PABST EXTRACT CO. Dept. 40 Milwaukee, Wis.

ELLINGWOOD'S THERAPEUTIST

(*Continued from page 32*)

develops the facts as to the specific influence, dosage, method of administration, etc.

All of this makes *Ellingwood's Therapeutist* an *exceedingly valuable working journal*, and one which no busy practitioner can afford to be without. The investment of one dollar for this journal by each reader of THE AMERICAN JOURNAL OF CLINICAL MEDICINE is a very small sum for the immense amount of practical matter he gets in each number and we certainly recommend the investment. Send the dollar to 100 State St., Chicago.

"PHYSIOLOGICAL ACTION OF IODINE. ITS COMPARISON WITH IODIDES"

A booklet has just been issued by the Burnham Soluble Iodiné Co., under the above title, which is worthy of a permanent place in every physician's office. It is a scientific, brief, and up-to-date résumé of the iodine question which every progressive physician will appreciate.

The facts pertaining to this important subject are set forth in a clear and conservative manner, and it is a distinctly high-class piece of pharmaceutical literature which should prove of much benefit to the medical profession.

A free copy will be forwarded to any physician upon request. Those who may not have already received a copy of this booklet will do well to write for one to the Burnham Soluble Iodine Co., Auburndale, Mass.

HIS PET

Some time ago I noticed several articles in your most excellent journal in regard to the busy doctor and his method of getting around among his patients. I have tried every method in the past twelve years from the bicycle to the automobile and find the last-named more than satisfactory.

My pet at the present time is a little Brush Runabout, weighing only nine hundred pounds, with a seven and one-half horsepower vertical engine. The power is ample to carry me over any hill in this city, which as you all know is a city of magnificent hills. So far, after an experience of several months with it, I find the average cost of upkeep to be about $7.00 per month, or about one-third the livery cost of keeping a horse in this town. Surely, after such a record the horse must be relegated to the background.

Now, my dear doctors, this may sound to you very much like a Brush advertisement, and I intended it for such, as there are a great many brothers who contemplate buying an automobile, but have been deterred from doing so by the supposed cost of upkeep. I have written the Brush manufactory, suggesting that they take out an extensive advertisement with CLINICAL MEDICINE, as I believe they have the physician's ideal method of locomotion, and as I am not a stockholder in CLINICAL MEDICINE, nor in the Brush Mfg. Co., no one can accuse me of mercenary motives.

Brothers, do away with the bicycle and old Dobbin and buy a Brush. It costs $550.00. Country roads and city streets look alike to this little car.

CARROLL BEHYMER, M. D.

Cincinnati, O.

IN THE ASCENDENCY

There seems to be but little doubt that the medical profession is gradually incorporating the alkaloidal methods into their practice by a kind of absorption which they think they get surreptitiously. Well, I have had an abundant opportunity to try various methods and I am sure the alkaloidal method is in the ascendency. While I am sure my diagnosis is the same, the treatment differs very much. I am sure you will never have to retrace your steps.

J. W. POOLE, M. D.

Whitney, Tex.

INTELLIGENT TREATMENT

I have for the last three years been using the alkaloids almost exclusively, and have induced quite a number of other physicians to use them, and *all*—every one—is pleased with the results. It is a fact, if you can make a correct diagnosis and treat the patient intelligently with the alkaloids, they will recover in every curable case. In the three years I have used them not one time have I been disappointed, and when I see the effects, especially in dysentery, pneumonia, anemia, and general debility, I just want to tell every physician, regardless of school, just to give them a trial. The relief from worry and anxiety is enough to pay for a trial.

S. H. DILLARD, M. D.

Athens, Ga.

SATISFACTORY BUTTERMILK TABLETS

I desire to inform you that the buttermilk tablets (Galactenzyme, Abbott) you sent me as samples are the most satisfactory I have yet tried. I have tried a number of makes and I had such poor results I had about given up. When I saw you were making these tablets, I felt surely they would do all claimed for them.

I find that under proper conditions a quart of rich sweet milk is completely curdled and of a pleasant acid flavor in about eighteen hours.

I handed some of the tablets to St. Luke's Hospital for trial. The hospitals are often at a loss to get good buttermilk for the typhoid fever cases.

L. R. MERKLEY, M. D.

Bellingham, Wash.

TWO LETTERS OF INTEREST

SILETZ, OREG., Feb. 23, 1910.

Huston Brothers Co., Chicago, Ill.

GENTLEMEN: Send me the Akouophone, and if it proves to be satisfactory, I will remit promptly, if not, I will return the instrument to you by mail. I have a good phonendoscope, but if your Akouophone works better, I will keep it. If this suits you all right.

Yours truly.

M. CLAUSIUS, M. D.

SILETZ, OREG., March 24, 1910.

Huston Brothers Co., Chicago, Ill.

GENTLEMEN: Instrument came to hand. Pardon delay in not answering ere this, but I wanted to give the instrument a thorough test, which I have done, and I am satisfied that it does the work. Enclosed find money order for $3.50 due you.

Yours very truly,

M. F. CLAUSIUS, M. D.

Physician U. S. Indian Service.

H-M-C FOR PAIN

Please send me 200 of your H-M-C tablets, half strength, at once. I have never seen anything like them. I used them in a case of beginning ulceration of tooth where everything had been tried to relieve the pain without result, and the patient had eight hours of refreshing, undisturbed sleep.

O. B. AMES, M. D.

F irfield, Me.

IMPORTANT NOTICE!

Physiologic Therapeutics, the live new journal published by Dr. Henry R. Harrower of Chicago, will celebrate the New Year with a special double number.

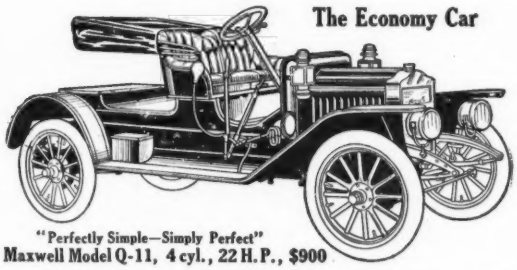
We learn that several thousand extra copies will be printed and sent with the season's greetings to such physicians as may be interested in seeing this able exponent of the progress in the nonmedicinal methods of treatment.

From the advance program which we have received it would seem that this number will be an especially fine one. Those of our readers who desire a copy should send a postal request to Dr. H. R. Harrower, Park Ridge, Illinois.

CONCENTRATION in diphtheria antitoxin is desirable only when the concentrating process is correctly carried out. If the antitoxic serum is so treated as to eliminate the nonantitoxic solids and reduce the water only proportionately, the result is a small volume of serum which is more easily injected and just as readily absorbed as the unconcentrated serum. If, on the other hand, the concentrating process eliminates the water alone there will result a sort of condensed antitoxin which is slowly absorbed, resulting much induration at the site of injection. The antitoxin of the National Vaccine and Antitoxin Institute of Washington, D. C., is highly concentrated, but not at the expense of absorbability. In proportion of solids it conforms closely to normal serum. In salt content it conforms to physiological salt solution. In National Diphtheria Antitoxin we therefore have a serum of the highest therapeutic efficiency.

The First Real Cost-Test Ever Made

Automobile *vs.* Horse



"Perfectly Simple—Simply Perfect"
Maxwell Model Q-11, 4 cyl., 22 H.P., $900

The Economy Car

"Maxwell"
$1\frac{8}{10}$ cents
per passenger mile

Horse and Buggy
$2\frac{1}{2}$ cents
per passenger mile

A public test of the Maxwell car and a horse and buggy on the streets of New York and its suburbs, under actual conditions of traffic, has just been completed.

Model Q-11 Maxwell

Expenses Stop when not in use

Distance traveled 457 miles.

COST

Gasoline	$5.60
Oil	.60
Grease	.13
Depreciation, car	3.66
Depreciation, tires	6.85
	$16.84
Cost two passengers—per mile	.037
Cost one passenger—per mile	.018

Daily average distance, 76 3/10 miles.

These costs, are based on gasoline purchased at 16, 18 and 20 cts. per gallon and oil at 65 cts. a gallon purchased en route; grease at 12 cts. pound; car depreciation, .008 per mile; tire depreciation, .015 per mile, Garage not included.

It Proves That:

The automobile is an economy.

Motor car extravagance is voluntary and unnecessary.

Its pleasures are within the reach of men of moderate means.

It is an indispensable factor in transportation, and a utility.

It is an implement to increase the earning power of man, conserve his time, and extend his field.

The automobile industry, now the fourth greatest in the country, is economically sound.

The Maxwell is the standard, efficient, economical, reliable, utility automobile, as perfect as human intelligence and handiwork can make it.

Horse and Buggy

Expenses Continue when not in use

Distance traveled, 197 miles.

COST

Hay	$1.20
Oats	4.50
Straw	.30
Shoeing	.498
Grease	.0012
Depreciation	3.349
	$9.8482
Cost two passengers—per mile	.05
Cost one passenger—per mile	.025

Daily average distance, 32 9/10 miles.

These costs are based on hay at 1 ct. a pound; oats averaging 25 cts. a 4-quart feeding, purchased en route; straw at $1.50 cwt., 100 lbs. per mo.; shoeing, $2.50 a month; grease, 12 cts. a pound; depreciation, horse, buggy and harness costing $375.00, .017 a mile. Stabling not included.

TEST SANCTIONED BY A.A.A.

We invited the Contest Board of the A.A.A. to conduct this test, that it might be in disinterested control.

The two vehicles ran six hours each day over a different, predetermined route. Account was kept of every expense entailed.

Everything was done to make the test normal, actual, fair and conclusive, and the results confirm our claim that Maxwell automobiles are cheaper to use than a horse and buggy.

THE ATTESTED RESULTS

The automobile cost 68/100 of a cent per passenger mile; the horse and buggy 1 44/100 of a cent.

The car covered 2¼ times the distance traveled by the horse.

The car averaged 76 3/10 miles—cost $1.03; the horse averaged 32 9/10 miles—cost 95 cents.

Up-keep, depreciation, and other charges made the total car-cost 1 8/10 cents per passenger mile; and the total horse and buggy cost 2½ cents per passenger mile.

Sale of Maxwells To Date

Sold to Sept. 30, '10	37,389
Sold during Oct. '10	1,767
Maxwells in use today	39,156

Watch the Figures Grow

SEND FOR THESE BOOKS

Latest Catalogue and other interesting literature containing convincing proof sent on request. Just write on a postal "*Mail Books.*"

MAXWELL-BRISCOE MOTOR CO.

Mott St., Tarrytown, N.Y.

Licensed under Selden Patent
Members A.L.A.M.

GOD BLESS THE DUKE OF ARGYLE

Is the title of a most interesting little booklet dealing with a philanthropical feature of this benevolent Scotch duke's life. The author's handling of this subject and his manner of associating it with the medical profession is the most clever piece of commercial literature we have ever seen, and if read and observed carefully, it cannot fail to prove both profitable and interesting.

Dissecting this little booklet from the standpoint of a medical editor is like making a new robe out of old material. The finished product is so bright, so radiant, and so refreshing, that one wishes he had more of it, if for nothing else than to disinfect the contagious, imagination of medical, surgical, and chemical theories. It is the mingling of the primitive past with the positiveness of the present. It drives the skeleton, which is the doubt as to the wisdom of modern principles of medical practice, from the brain of man. Its commercial references are admirably blended with truthful deductions.

The little booklet is written and published by J. S. Tyree, at Washington, D. C., and is for free distribution.

TWO CASES OF VOMITING OF PREGNANCY

My experience with two cases of this troublesome complication, which I succeeded in relieving by a novel method of treatment, may be of interest to your readers.

Case 1. Mrs. E., primipara, suffered with nausea and vomiting even up to the eighth month, with no relief by magnesia, cerium oxalate, bismuth subnitrate, cocaine or, in fact, any of the remedies that have given success to our best clinicians. Sodoxylin was then tried. It relieved the nausea within four hours. This patient continued the use of this preparation as indicated until she was delivered.

Case 2. Mrs. C., primipara, suffered so intensely from nausea and vomiting that she had been confined to her bed for four weeks. I prescribed remedies similar to those used in Case 1, but with no relief. I then prescribed Sodoxoylin. Although it did not control the nausea entirely, it was the only preparation that gave any relief whatever.

B. W. TOOTHAKER, M. D.

St. Joseph, Mo.

DIURETIN (KNOLL)

In angina pectoris Dr. P. C. Franze of Bad Nauheim, Germany, recommends subcutaneous injections of morphine with simultaneous employment of hand and foot baths or inhalation of amyl nitrite, or the use of nitroglycerin tablets. A very valuable remedy which is not generally known is the following:

Fol. digital. pulv. 0.1
Caffein. pur. 0.2
Diuretin (knoll) 0.5
Morphin. mur. 0.005

M. ft. pulv. D. tal. dos. No. V in capsul. amylac.
Sig.: One capsule at the time of the paroxysm, another capsule one-half hour later, if necessary.

—*Folia Therapeutica*, April, 1910, No. 2.

ESPECIALLY PLEASED WITH H-M-C

I have used for some time several of the Abbott specialties and find that they may be depended on. Especially am I pleased with H-M-C. It is the most satisfactory and dependable remedy of its kind I have ever used.

S. T. HUMPHREYS, M. D.

Nocona, Tex.

H-M-C DOES NOT DISAPPOINT

I use H-M-C tablets and they do not disappoint me. They are the doctor's friend in time of need, when he meets that class of patients who spurn the use of chloroform.

W. E. BRIDGE, M. D.

Gober, Tex.

COLLARGOL IN JOINT RHEUMATISM

Professor Plehn (municipal Hospital Urban at Berlin) *Deutsche Med. Wochenschrift*, Dec. 24, 1908, says:

"Our most approved remedy in joint rheumatism is collargol intravenously, as recommended by Credé, and as systematically employed by Riebold in the Dresden municipal Hospital. The attempts at explaining the curative processes are as hypothetical as for salicylic acid; development of the disease germs is said to be hindered, a leukocytosis stimulated, catalytic processes set up, etc. But be this as it may, the favorable effect is hardly to be doubted, and for some time past we have not hesitated to use collargol intravenously in joint rheumatism which is exceptionally resistant to salicylic acid, or when salicylic is not tolerated well enough to be given in full doses, or when the discontinuance of salicylic acid is followed by repeated relapses."

PROGRESS NUMBER

The January 1911 issue of "CLINICAL MEDICINE" will be our Annual Progress Number. Don't miss it. It will alone be worth the price of a year's subscription.

BATTLE & Co. of St. Louis have just issued No. 14 of their series of "Charts of Dislocations." This series forms a most valuable and interesting addition to any physician's library. They will be sent free of charge on application, and back numbers will also be supplied. If you have missed any of these numbers write Battle & Co. for them.

My Recipe for Success.

I *manufacture* cigarets primarily because I am a cigaret *smoker.* I am not trying simply to make something *to sell.* I am making something *to smoke.* My success would indicate that American smokers were ready for just that change from the "selling" to the "smoking" point of view. I consider that my selling success has been due mainly to the fact that I have left selling out of consideration, except as a natural and healthy result of making good on the smoke. Simple recipe for success, isn't it? It *is* simple, but it *works.* I never knew it to fail. It's so simple that I often wonder why more people don't try it.

I've smoked cigarets off and on for more than twenty years. I smoked American cigarets long before the more exotic Oriental kinds were heard of in this country. Until eight years ago I flirted with about every new cigaret that came along, always hoping to find one I could stick to, because I have always preferred a cigaret to any other form of smoke. A good trial always convinced me that I was in wrong. Eight years ago I came in contact with a number of Russian officials. They smoked Russian cigarets. I smoked with them. *Here at last was something different.* I begun importing them for my own use—five and ten thousand at a time. But I couldn't keep them on hand. My friends wanted them too badly.

I went on in this way for two years, smoking as many as I wanted (when I had them) without feeling the slightest effect except one of exceeding satisfaction with my smoke—never any of that "craving" before smoking and "depression" afterward, with which most cigaret smokers are familiar. I investigated the Russian cigaret industry pretty thoroughly. I went after reasons—and I found them. I imported the Russian blends in bulk and experimented with the making of cigarets. I studied the cigaret industry in this country. I finally acquired from my Russian manufacturers all rights for America in their blends, trade-marks, etc., and their foreman to start my factory.

I have been making Makaroff Russian Cigarets in this country now for six years. Our principal difficulty has been in getting together enough Russian workmen to make enough of these cigarets to make them a national proposition. But now we have them.

From the day we started to make them to this, *the cigarets have never varied,* profit or no profit. I always have believed that if we produced the quality the public would produce the sales. And that faith has been justified. You will always find in

MAKAROFF RUSSIAN CIGARETS

a quality that corresponds with the straightforwardness of the advertising. We have now introduced the goods so thoroughly to dealers that you can get them almost anywhere in the best cigar stores, hotels, cafes, dining cars, etc. Any dealer who hasn't got them can get them quickly from his local jobber. If he doesn't want to, we will supply you promptly, by mail, on receipt of the dealer's name and address, or simply his address, so that we may investigate his reason for refusal.

If you do not like these cigarets at the first trial, remember that they are mighty different from what you are accustomed to, and that *the difference is all in your favor.* Take time to get a little used to them and you will find out just what we mean.

Makaroffs are absolutely pure, clean, sweet, mild *tobacco, untouched* by *anything whatever* to give them artificial flavor, sweetness, or to make them burn. You will find that you can smoke as many as you want of them without any of the nervouness, depression or "craving" that follows the use of ordinary cigarets.

Pure tobacco won't hurt you. You may not be used to it, and you may not like the first Makaroff, but you'll like the second one better, and you'll stick to Makaroffs forever if you once give them a fair chance. We have built this business on quality in the goods and intelligence in the smoker—a combination that simply can't lose. We waited quite a while, but it has won in our case and won big. The result is, that

"This is a Makaroff year—nearly everybody smokes them now"

Makaroffs are 15 cents and a quarter in boxes of ten. $1.50 to $6.00 for 100's.

At Your Dealer's

Makaroff - Boston

At Your Dealer's

Mail address, 95 Milk Street—Boston, Mass.

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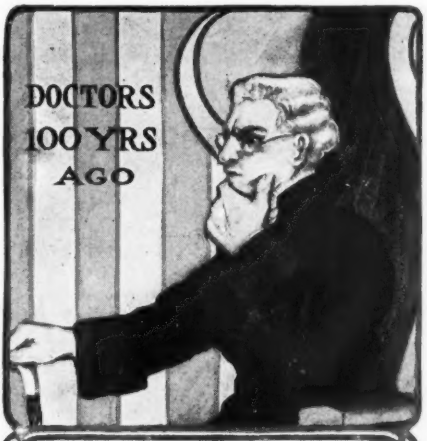

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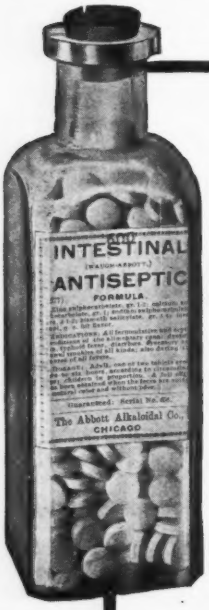

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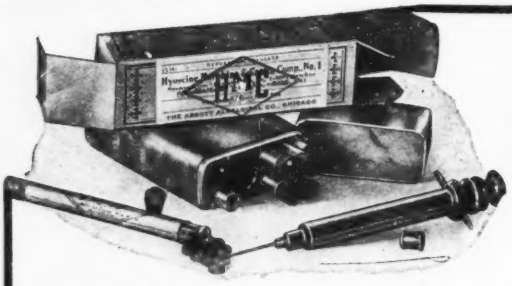

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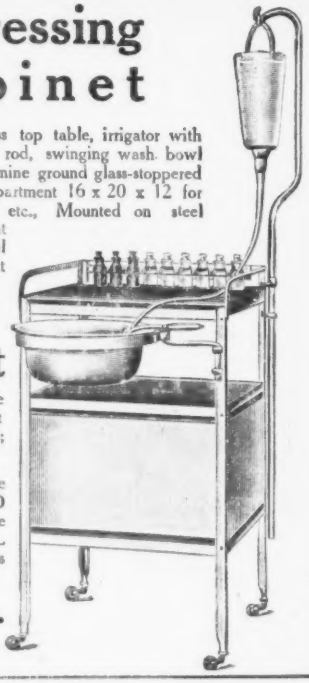

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